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ABSTRACT

This workbook contains a series of self-instructional guides for producing teacher-made materials useful in classroom situations. The 60 different guides provided cover a variety of techniques for (1) mounting pictures to posterboard, (2) laminating visuals, (3) lettering, (4) making visuals for use on the overhead projector, (5) making instructional displays, and (6) enlarging or reducing visuals. Each guide contains the following sections: title, definition, performance objective, procedure, materials needed, helpful hints, evaluation criteria, and tab labels. (LLS)

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WORKBOOK

(NUMBER I - BASIC TECHNIQUES)

PRODUCTION OF TEACHER-MADE MATERIALS

SELF-HELP CARDS

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THOMAS KEITH MIDGLEY

1612 5th St.,
Cheney, Washington
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DEDICATION:

TO MY CREATIVE STUDENTS

*****

"AN OUNCE OF VISUALIZATION
IS WORTH
A POUND OF LECTURE"

Copyright © 1973
Second Printing 1978
With Revisions and Additions

By Thomas Keith Midgley
Cheney, Washington 99004

ACKNOWLEDGEMENTS: . . .

The author wishes to acknowledge his appreciation to his co-workers and his students for their encouragement and suggestions pertaining to the writing of these Workbooks.

ABOUT THE AUTHOR

Dr. Thomas Keith Midgley has taught in the public schools in Utah for twelve years on both elementary and secondary levels. He has also been an elementary school principal, guidance counselor, school psychologist and psychometrist.

He obtained his doctorate degree from Indiana University in Audiovisual Communications, Instrutional Development, Media Management, Curriculum and History.

Upon finishing his degree, he taught at California State College at Long Beach. He was an Associate Professor in the education department and was the assistant director for the Audio-Visual Center.

In 1965, he came to Eastern Washington University as the director of their Audio-Visual Instructional Media Center and half time teaching in the education department. In 1968, he moved into full time teaching. He is a Professor of Education and the advisor for the undergraduate and graduate Master's programs in Audiovisual Communications.

BACKGROUND CONCERNING THE STEP-BY-STEP SELF-HELP CARD TECHNIQUE

For many years, the author used "Step-by-Step Self-Help Cards" for independent study during the years he taught in public schools. This self instructional technique was used in math, social studies, language arts, Spanish, science, reading and other areas. The students enjoyed this method of individual study inasmuch as they could select a topic, concept, or task they were interested in and then proceed on their own, commensurate with their individual ability. This process allows the teacher more time to work with students individually, for the "self-help cards" provide the basic instruction as to knowledge and skills, (the cognitive and psychomotor domains of learning), and the teacher then is able to work more with attitudes and special problems (the affective domain of learning).

For many years, the author has been teaching college and university courses in areas concerned with teacher development. In several of these courses he has tested the use of Step-by-Step Self-Help Cards. These proved to be a very successful technique in the Production of Teaching Materials courses, thus, a series of these Step-by-Step Self-Help Cards have been written and published in two workbooks.

Workbook No. 1 — Basic Techniques for the Production of Teacher Made Teaching Materials

Workbook No. 2 — Advanced Techniques for the Production of Teacher Made Teaching Materials

EVERY TEACHER, LIBRARY, RESOURCE CENTER, OR TEACHER WORKROOM, CONCERNED WITH THE LOCAL PRODUCTION OF TEACHING MATERIALS NEEDS A SET OF THESE STEP-BY-STEP SELF-HELP CARDS.

The Workbook is designed so that the students can produce their own set of Self-Help cards. The directions for each Self-Help card should be mounted on to a separate file folder with Dry Mount Tissue or rubber cement. (Oak Tag File Folders 9" x 12" work well as the base upon which to mount the procedures and an example for each Step-by-Step Self-Help Card.)

Each Step-by-Step Self-Help card contains the following sections:

- TITLE a short statement giving the title of the Step-by-Step Card

  DEFINITION in most cases, this item is important inasmuch as it defines the term or process so that the student can have more understanding and meaning when the PERFORMANCE OBJECTIVE is read.

  PERFORMANCE OBJECTIVE states what is to be done or made.

  PROCEDURE is listed step-by-step, line upon line, and precept upon precept. The length of this item depends upon the processes being discussed. This step-by-step procedure tells how and what to do in order to accomplish the performance objective.

  MATERIALS NEEDED lists all items required in order to accomplish the task or project being discussed. In each case, you should gather together the materials needed prior to commencing the project.

HELPFUL HINTS contains additional help, suggestions, and recommendations that will assist with the objective on each card.

EVALUATION lists some of the criteria upon which you can judge or evaluate a well done finished project.

TAB LABELS (two) are at the end of each Step-by-Step Self-Help card and can be cut out and attached to both sides of the tab on the file folder for convenient reference when viewed from either side.

IDENTIFICATION. As you produce your set of Step-by-Step Self-Help cards, it is suggested that you put your name on them or some local identification label.

SAMPLE. Follow the outlined directions for each card and make the best examples you can for each process. These examples should be no smaller than 6" x 6" and in many cases larger. Mount them to the file folders with rubber cement. (Exceptions: transparencies should be attached to file folders with tape only at the top of the transparency frame, Chartex mount sample attached with chartex hinge at top only, opaque mount, full size example 11" x 14", cut in half and taped so it will fold up and fit into its file folder.)

OK? Let's get started!

"I hear and I forget,
I see and I remember,
I do and I learn,"

The first three projects that you read and do are:

Card 1. Rubber Cement Mounting
Card 7. Mounting with MT5 Dry Mount tissue
Card 18. Laminating with Seal-Lamin

When you have mastered these three processes you can do any of the other techniques concerned with mounting, laminating, and transparencies, etc. with very little trouble because cards 1, 7, 18 are basic concepts related to many of the others.

Special Note:

In the future, if you ever lose one or two of your Step-by-Step Self-Help Cards, send a request for the cards that are missing or damaged to: T. K. Midgley, Eastern Washington University, Cheney, Washington 99004, and include a stamped self-addressed envelope and the cards needed (one or two) will be mailed to you at no charge.

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STEP-BY-STEP CARD FOR RUBBER CEMENT MOUNTING (Set I - Mounting - Card 1)

DEFINITION: Rubber cement is a special mounting adhesive that has a strong holding ability when spread upon the two surfaces that are to be joined together. Both surfaces must be dry, however, before placing them together.

PERFORMANCE OBJECTIVE: Mount several pictures using rubber cement.

STEP-BY-STEP PROCEDURE:

Read completely through all these instructions carefully at least once before you start with this project.

1. Trim visual.
2. Place visual on a mounting poster board and make small guidemarks at each corner (about 1/8" from corners).
3. Apply a thin coat of rubber cement on the marked area of the mounting board. Using a piece of cardboard as a straight edge you can keep the rubber cement confined within the marked area.
4. Lay the picture face down on a sheet of newspaper. Apply a thin even coat of rubber cement on the entire back of the visual (be sure you coat the edges and corners). Keep a protective sheet under the visual to prevent getting cement on the front of the picture and the table.
5. Allow both coated areas to dry thoroughly.
6. Place two ordinary sheets of wax paper on the cemented surface of the mounting board, overlapping them at the center. These sheets will prevent the visual from adhering to the board during positioning.
7. Place the visual on top of the wax paper sheets with cemented side down. Position it within the guidemarks.
8. Lift one half of the picture holding the other half in place. Remove the sheet of wax paper that is under the lifted side of picture. Then work picture down from center to outer edge.
9. Lift the second half of the picture remove the second sheet of wax paper.
10. Now smooth down the surface of the second half of the picture with palm of hand from the center to the outer edges.
11. Remove excess cement and guidemarks by rubbing around edges of visual with your fingers or by using a rubber cement eraser. Rub only toward corners, otherwise you may pull them loose.

HELPFUL HINTS:

1. This technique is easily used in the home as well as in the school.
2. Make the guidemarks in corners, showing where visual should be placed, about 1/8" to 1/4" out from the corners from where the visual will be mounted then after the picture is mounted the guidemarks can easily be erased.
3. Rubber cement usually stains the cardboard so try to be accurate.
4. If the mounting cardboard is stained by the rubber cement you can either finish staining the whole mount so that it will match, or else cover the stained area with a posterboard mat frame or narrow posterboard strips.
5. Thin rubber cement with rubber cement thinner if it gets too thick.

MATERIALS NEEDED:

Visual and mounting board
Two sheets of wax paper
Rubber cement eraser
Protective paper (newspaper)
Jar of rubber cement and 2 inch brush
Rubber cement thinner

EVALUATION PROCEDURES:

The picture should be placed correctly. The picture should lay flat with corners and edges cemented down to mounting board. Excess cement should be removed from the posterboard. The mounting board and the picture should be free from stains and rubber cement.

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RUBBER CEMENT MOUNTING
(Set I - Mounting - Card 1)

RUBBER CEMENT MOUNTING
(Set I - Mounting - Card 1)

STEP-BY-STEP CARD FOR TWO SIDED TAPE MOUNTING (Set I - Mounting - Card 2)

DEFINITION: Two sided tape contains adhesive on both sides whereas most tapes are sticky only on one side.

PERFORMANCE OBJECTIVE: Mount a picture to a cardboard using two strips of two sided tape.

STEP-BY-STEP PROCEDURE:

Read completely through all these instructions carefully at least once before you start this project.

1. Select a picture and trim it to desired size.
2. Position it on the mounting cardboard and make guidemarks with pencil at the corners.
3. Remove picture and adhere two strips of two sided tape to the back of the visual (one near the top and one near the bottom).
4. Position the picture above the cardboard mount, then press it down within the pencil guidemarks. Smooth it flat with your hand.

HELPFUL HINTS:

1. This is a quick and easy way to mount a picture but it should not be considered as one of the better mounting techniques.
2. Some tapes can eventually discolor the visual, and may even loose their holding quality.
3. When storing or handling this type of visual be aware that the pictures can easily snag and tear.

MATERIALS NEEDED:

A picture
3" to 10" of tape
Mounting cardboard

EVAULATION PROCEDURES:

Picture should lay flat. The tape must not extend out beyond the sides of the mounted picture.

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TWO SIDED TAPE MOUNTING
(Set I - Mounting - Card 2)

TWO SIDED TAPE MOUNTING
(Set I - Mounting - Card 2)

STEP-BY-STEP CARD FOR WET MOUNTING WITH WHITE GLUE (Set I - Mounting - Card 3)

DEFINITION: White glue is a common glue for home and school use. Using white glue properly is an effective technique for mounting pictures.

PERFORMANCE OBJECTIVE: Make two or three white glue mounts using the following procedures.

STEP-BY-STEP PROCEDURE:

Read completely through all these instructions carefully at least once before you start this project.

1. Soak clean cloth (12" x 12") in water then squeeze until most of the water is removed.
2. Place the damp cloth on a masonite mounting board (15" x 15").
3. Pour a small amount of white glue on to the center of the damp cloth.
4. Roll the glue until there is a smooth, thin, even coating on the cloth. Avoid too much glue. This step can be done with your hand if you don't have a roller.
5. Place the back of the picture on the glue rolled cloth.
6. Make sure all the edges of the back of the picture touch the glue and receives a thin coat.
7. Lift the picture from the cloth and place the picture on the posterboard.
8. Smooth the picture with your hand or with a sponge if the picture is laminated.
9. Clean the picture and posterboard and let dry. You may have to make boarders even.
10. Clean up all mounting materials and return them to the work station.

HELPFUL HINTS:

1. In order to not waste expensive white glue, several students should do this type of mounting at the same time.
2. Clean up all spills using a wet sponge.
3. Clean up when through.
4. Pictures that have been laminated with clear plastic film are excellent visuals to use with this technique because they lay flat and are easy to sponge clean if glue gets on their surface.

MATERIALS NEEDED:

White glue
Visuals
Clean cloth (12" x 12")
Mounting board (about (15" x 15")
Sponge for cleaning
Photo roller
Table
Pan of water

EVALUATION PROCEDURE:

All edges and corners should be mounted down. The mounted picture should be free of wrinkles. There should be no glue stains on the face of the mounted picture or on the poster board.

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WHITE GLUE MOUNTING
(Set I - Mounting - Card 3)

WHITE GLUE MOUNTING
(Set I - Mounting - Card 3)

CUT... MOVE TO PROPER CARD

MATERIALS NEEDED:

Milk cartons (any size)
Pictures
Hot Press
Tacking iron
Seal weights
News print
Seal-release paper
Assorted backing materials

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MILK CARTON MOUNTING
(Set I - Mounting - Card 6)

MILK CARTON MOUNTING
(Set I - Mounting - Card 6)

STEP-BY-STEP CARD FOR WET MOUNTING WITH WALLPAPER PASTE (Set I - Mounting - Card 4)

DEFINITION: Wet mounting is a process of backing a paper chart or large picture with cloth muslin or sheeting. This is done by using wallpaper paste and adds flexibility and strength to a visual that is large, fragile or frequently used.

PERFORMANCE OBJECTIVE: Mount a chart on cloth using wallpaper paste.

STEP-BY-STEP PROCEDURE:

Read completely through these instructions carefully at least once before you start this project.

1. Soak new muslin cloth in warm water 15 minutes in order to remove sizing.
2. Sift flour into one cup of cold water until it forms a smooth liquid the consistency of thick soup or whipped cream.
3. Squeeze excess water from the muslin.
4. Stretch cloth evenly on the mounting board; fasten down two adjacent sides with thumb tacks at three inch intervals, then lift cloth at loose corner and stretch out any slack. Next, tack down last two sides (on the edge of board only).
5. Place visual face up, on cloth; mark corners with L shaped marks.
6. Move visual face down, onto clean surface, and soak back with wet sponge.
7. With brush, apply paste evenly to the surface of the mounted muslin (not the visual). Extend paste slightly beyond your markings.
8. Place the wet visual on the cloth. Position the corners of the visual between the markings.
9. With rolling pin, roll horizontally and vertically from center. DO NOT ROLL TO THE EDGE! (Roll in a plus sign pattern +.)
10. Now roll an X pattern. Roll from center to each corner. Lift corners to remove tension. DO NOT ROLL TO THE EDGE!
11. Place clean newsprint strips or paper towels over all edges of the visual. This paper will help absorb the excess paste as you finish pressing down all the edges with the rolling pin.
12. Remove paper strips and discard, then sponge up any excess paste around edges.
13. Let dry on the board overnight.
14. Remove visual from board, and trim.
15. Turn under excess muslin and hem.

HELPFUL HINTS:

1. To assure a clean mount, wash your working surface before you begin, and make sure mounting board is also clean.
2. Do not fasten any thumb tacks to surface of mounting board.
3. You will need about a cup of water for each large mount.
4. Use large-head thumb tacks. Do not press all the way into the board.
5. A little glue sizing added to the paste helps.
6. Wheat wallpaper paste should be used because it is treated to prevent weavels and mice from eating it or the finished mount.
7. Regular flour paste will work, however.

MATERIALS NEEDED:

Unbleached muslin, old sheet or cloth
Wallpaper paste
Mounting board 3' x 4' or old smooth table
Thumb tacks or staple gun
Rolling pin
Two-inch brush
Paper towels or newsprint
Sponge
Bucket or pan
Water
Sizing

EVALUATION PROCEDURE:

1. Visual should be wrinkle free.
2. Visual should be free from air bubbles, or bumps.
3. Edges of the visual should be neatly hemmed.
4. Make sure paste is smooth and free from bumps.

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WET MOUNTING (WALLPAPER PASTE)
(Set I - Mounting - Card 4)

WET MOUNTING (WALLPAPER PASTE)
(Set I - Mounting - Card 4)

STEP-BY-STEP CARD FOR WAX MOUNTING (Set I - Mounting - Card 5)

DEFINITION: Wax mounting is a process of adhering a picture to posterboard by using a liquid floor wax.

PERFORMANCE OBJECTIVE: Mount two or three pictures onto posterboard with liquid floor wax using this process.

STEP-BY-STEP PROCESS:

Read completely through all these instructions carefully, at least once before you start this project.

1. Select and pretrim your picture for mounting.
2. Mark the position of the picture on the posterboard with tiny pencil marks.
3. Place the visual face down on a clean surface. (Newsprint or typing paper.)
4. Using a thin sponge or cotton, spread a coating of liquid wax onto the entire back of picture, including all edges.
5. When it is completely dry, add a second coat, including edges, then let it dry.
6. Add a 3rd and 4th and 5th coat the same way.
7. After at least 5 coats of wax have been applied and are dry, place picture on posterboard.
8. Using a cover sheet over the picture (seal release paper), tack with tacking iron so picture will not move--then place in hot press set at 270^{0} for 10 seconds.
9. Wax should melt and adhere picture to posterboard.
10. If there are wrinkles or bubbles, put it back into the hot press for another 15 seconds.

HELPFUL HINTS:

1. Make sure that the entire back surface of the visual is covered with wax each time, including the edges.
2. A small thin sponge works best and doesn't waste the wax.
3. You may also want to try wet wax mounting. Coat the back of a picture and immediately place it on posterboard and smooth down with your hand and hold in place until it dries.

MATERIALS NEEDED:

Liquid floor wax
Small thin sponge
Pictures
Posterboard
Hot Press
Tacking iron
Pencil
Cover Sheet
Paper cutter
Clean paper

EVALUATION PROCEDURES:

The mounted picture should be smooth, free from bubbles and wrinkles and completely sealed to the posterboard. There should be no wax smears on the posterboard.

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WAX MOUNTING
(Set I - Mounting - Card 5)

WAX MOUNTING
(Set I - Mounting - Card 5)

STEP-BY-STEP CARD FOR MILK CARTON MOUNTING (Set I - Mounting - Card 6)

DEFINITION: Milk carton mounting is the process of mounting pictures to the stiff panels of the milk carton using only the plastic coating on the carton as the adhesive.

PERFORMANCE OBJECTIVE: Mount several pictures to various size milk carton panels (single or multi-fold).

STEP-BY-STEP PROCEDURES:

Read completely through these instructions carefully at least once before you start this project.

1. Collect empty milk cartons (quarts, half-gallon, gallon). Cut them apart so that you can use the flat side panels for mounting.
2. Wash the panels to remove any dried milk and let them thoroughly dry before proceeding.
3. Trim your pictures so they will fit onto the size panel you are using. Either right to the edge of the panel or else recede so that a small white part of the panel shows around the edges of the picture.
4. (Always pre-dry all pictures in order to remove any moisture. Place pictures in between a Newsprint cover sheet and then into hot press for about three seconds.) Newsprint obsorbs moisture whereas Seal-Release paper does not.
5. Using the Tacking Iron--tack visual to the white side of the milk carton. When heat is applied, the plastic on the milk carton melts and holds the picture. (When using the Tacking Iron always use a protective paper between the Tacking Iron and the face of the picture being mounted otherwise the tacking iron will stain and spot the surface of the picture.)
6. Place the milk carton with attached picture in between a seal-release cover sheet and then into the hot press--(set at 225^0) for 20 seconds.
7. Remove cover sheet and the picture from the hot press and place the cover sheet with the mounted picture under a seal-weight in order to ensure a firm bond and to speed cooling. (Leave for 15 seconds before checking the bond of your mounting.)
8. If bubbles are in your mount or parts did not seal down, repeat the process. (Put in hot press for another 10 seconds.)

HELPFUL HINTS:

1. Try experimenting with different brands of milk cartons inasmuch as the type of plastic and its thickness may vary the time needed for mounting.
2. Milk cartons (quarts, half-gallons, gallons) are an excellent and inexpensive stiff mounting material that can be used for mounting study cards, task cards, or visual materials for games.
3. Multi-fold visuals using 2,3, or 4 unseparated panels of the milk carton can be used for special visuals and effects. Try making some of these milk carton, multi-panel, mini-accordian book mounted displays.
4. To improve the look of your mountings, the back side of the milk carton mountings can be covered with wallpaper scraps, fabric, wrapping paper, or printed plastic stick-on paper. With the proper amount of heat and pressure most of these items will adhere to the printed side of the milk carton using only the plastic on the carton. (Place in hot press, with seal-release cover sheet, for 40 to 60 seconds.)
5. If materials will not adhere to the back of the milk carton using the above procedures, you may have to use rubber cement.

STEP-BY-STEP CARD FOR DRY MOUNTING WITH MT-5 (Set I - Mounting - Card 7)

DEFINITION: MT-5 Dry mount tissue is a mounting paper material that is coated on both sides with a heat-sensitive adhesive that melts when heat and pressure is applied to it. A picture can be permanently mounted to a cardboard by placing a sheet of MT-5 between the picture and the cardboard and then placing it in a hot press. When the picture cools the adhesive forms a strong bond between the cardboard and the picture. (MT-5 is the brand name for the product made by SEAL Co.)

PERFORMANCE OBJECTIVE: Mount several pictures using MT-5 dry mounting tissue by using the Seal Hot Press.

STEP-BY-STEP PROCEDURE:

Read completely through all these instructions carefully at least once before you start this project.

1. Pre-dry and heat the picture and cardboard in the hot press for 5 seconds.
2. Set the temperature gauge on the Hot Press at 225°.
3. With a tacking iron (set at medium high) tack a sheet of MT-5 to the back of the picture in the middle.
4. Next trim the picture and the tissue together, at the same time around all the edges.
5. Place the picture on the cardboard and tack the tissue under the picture to the cardboard in two diagonal corners.
6. Place the picture on the posterboard in between a clean cover sheet or seal release paper and place in hot press for 5 to 15 seconds.
7. If any bubbles or wrinkles form, check the temperature or the time.
8. When it is mounted correctly, remove from the hot press and immediately place the mount under a metal weight to speed cooling and promote adhering.

HELPFUL HINTS:

1. MT-5 stands for Mounting Tissue 5 seconds. (In many cases, it takes longer than 5 seconds for the adhering to take place.)
2. Temperatures that are too high or too low will cause bubbling or blistering in the mount. Also, if you leave the mount too long or too short of a time.
3. Save scraps of MT-5, they can be used for many projects by butting them together (edge to edge but do not overlap).
4. Wrinkles or bubbles can be worked out with a tacking iron but be sure to place a cover sheet over picture before you use the tacking iron on the picture.

MATERIALS NEEDED:

MT-5 Dry Mount tissue
Pictures
Cardboard for mounting
Scissors
Hot Press
Tacking Iron
Cover sheets or
  seal-release paper
Metal weights

EVALUATION PROCEDURE:

No dry mount tissue should show beyond the edges of the mount. No bubbles or wrinkles should be in the mount and all edges must lay flat.

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DRY MOUNTING WITH MT-5
(Set I - Mounting - Card 7)

DRY MOUNTING WITH MT-5
(Set I - Mounting - Card 7)

STEP-BY-STEP CARD FOR MAKING A CUTOUT MOUNT USING MT-5 (Set I - Mounting - Card 8)

DEFINITION: A cutout mount is a picture that is trimmed, eliminating all the surrounding paper and leaving only the basic visual.

PERFORMANCE OBJECTIVE: Make a detailed cutout mount using dry mounting tissue.

STEP-BY-STEP PROCEDURE:

Read completely through all these instructions carefully, at least once, before you start this project.

1. Place the untrimmed picture in hot press at 225° to dry and press out moisture or wrinkles.
2. Cut MT5 approximately the same size as the picture.
3. Tack the MT-5 to the back of the picture with the tacking iron (set at medium high).
4. If there is a lot of detail to your cutout mount, you may need to tack the MT-5 to your picture in several places.
5. Cut out the picture and MT-5 together, at the same time as one unit, with scissors or cutting tool.
6. Tack picture to mounting board.
7. While tacking picture, tack only the MT-5 to the board. (Never touch tacking iron directly to the surface of the visual. It can stain and soil the picture.)
8. Place picture with mounting board inside a clean folded cover sheet, or seal release paper, in order to protect the surface.
9. Insert in hot press (225°) and close for 5 to 15 seconds.
10. Remove from hot press and place under a metal weight. This speeds cooling and helps the MT-5 adhere. The weight also helps to prevent blistering and bubbles from forming on the mount.

HELPFUL HINTS:

1. Do not forget to cut MT-5 with the picture.
2. Be sure to tack the MT-5 to the back of the picture.
3. Thicker pictures require more time in hot press.
4. When the cutout has detail, use a sharp razor blade, or a special cutting tool for trimming the picture and MT-5 together.
5. If any MT-5 shows outside the picture after mounting, use a razor blade or cutting tool to remove it.
6. A pair of small precision trimming scissors are very useful for cutout mounts.
7. Select a picture that gives you some challenge and experience instead of just a circle or a simple pattern.
8. Any time you do a cutout mount, it should always be mounted with dry mount tissue. Never use rubber cement.

MATERIALS NEEDED:

Visual
MT-5
Mounting board
Clean newsprint cover sheet or seal release paper
Scissors
Razor blade or cutting tool
Tacking Iron
Hot press

EVALUATION PROCEDURE:

Make sure there is no MT-5 showing around the cutout picture. Do not have any air bubbles or wrinkles in the cutout mount.

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CUTOUT MOUNT USING MT-5
(Set I - Mounting - Card 8)

CUTOUT MOUNT USING MT-5
(Set I - Mounting - Card 8)

STEP-BY-STEP FOR CHARTEX MOUNTING (Set I - Mounting - Card 9)

DEFINITION: Chartex is a cloth material with a heat sensitive adhesive on one side. When applied to the back of charts or posters it strengthens them and makes it possible to roll them. (Chartex is the brand name for this product made by Seal Co.)

PERFORMANCE OBJECTIVE: Mount a visual on Chartex, using the hot press.

STEP-BY-STEP PROCEDURES:

Carefully read through all these instructions at least once before starting this project.

1. Preheat press to 200°.
2. Predry the visual in the press for 5-10 seconds.
3. Trim the visual if necessary.
4. Cut a piece of Chartex exactly the same size as the visual.
5. Turn the visual face down.
6. Put the shiny or slick side of the Chartex against the back of the visual.
7. With a tacking iron, tack the Chartex to the visual in two areas near the center. If the visual is large, you may need to tack the Chartex to the visual closer to the edges. (Excessive tacking can cause wrinkles.)
8. Place the visual and Chartex in between two pieces of seal release paper.
9. Place in press for 10-15 seconds. Remember only 200°.

HELPFUL HINTS:

1. Chartex can be difficult to cut with a paper cutter because it tends to ravel.
2. Watch temperature and time in press carefully. Extreme heat can cause wrinkles.
3. Charts backed with Chartex can be rolled for storage without cracking or tearing the visual.
4. A chart can also be laminated prior to having the Chartex applied to the back.
5. Seal release paper is a special product made by Seal Company. It is an excellent paper to be used as a cover sheet because mounting and laminating materials will not stick to it.

MATERIALS NEEDED:

Visual
Chartex
Cover sheets or seal-release paper
Scissors
Tacking iron
Dry mounting press.

EVALUATION PROCEDURES:

The visual should be smooth, completely, wrinkle and bubble free.
Chartex should not extend beyond the edges of the visual.

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CHARTEX MOUNTING
(Set I - Mounting - Card 9)

CHARTEX MOUNTING
(Set I - Mounting - Card 9)

STEP-BY-STEP CARD FOR FOTO FLAT DRY MOUNT TISSUE (Set I - Mounting - Card 10)

DEFINITION: Foto Flat is a wax-coated Dry Mount Tissue that is designed for lower temperature and pressure than the MT-5. It is produced by SEAL Company. It is especially designed for mounting photographs and other delicate items where excessive heat might cause damage.

PERFORMANCE OBJECTIVE: Mount 2 or 3 photographs using Foto Flat Mounting Tissue using the hot press.

STEP-BY-STEP PROCEDURE:

Read completely through all these instructions carefully at least once before you start this project.

1. Tacking iron dial should be set between low and medium. Tack Foto-Flat to the back of a photograph near the center with the tacking iron.
2. Set temperature gauge of the hot press at 180^{0}.
3. Trim picture and tissue to desired size, making sure both are exactly the same size.
4. Position picture on mounting board. Hold securely in place. Lift one corner of picture and tack tissue to mounting board.
5. Cover with a clean sheet of paper; Seal Release paper is the best cover sheet. Place in hot press for 5 seconds.
6. Remove from hot press, if it is not mounted, put back in press for another 5 seconds. When mounted, place the picture immediately under a metal weight to help cooling and to promote adhering to take place.

HELPFUL HINTS:

1. Do not overheat the visual (not over 180^{0}) and do not leave in the press over 5 to 8 seconds at a time.
2. Technically Foto-Flat can be a temporary mount inasmuch as the mounting tissue is wax and it can be re-heated and when hot the picture can be removed from the tissue and the mounting cardboard.
3. Foto Flat is specifically designed for mounting photographs; however, it works especially well for mounting delicate items like dried leaves, lace, fabrics, etc. It also works well for mounting flat items on top of sealamin.

MATERIALS NEEDED:

Photographs
Foto-Flat Mounting Tissue
Posterboard
Clean cover sheet or seal-release paper
Tacking iron
Hot press

EVALUATION PROCEDURE:

Mounting should be flat, neat and clean with no wax protruding along the edges of the mount.

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FOTO-FLAT MOUNT
(Set I - Mounting - Card 10)

FOTO-FLAT MOUNT
(Set I - Mounting - Card 10)

STEP-BY-STEP CARD FOR AN OPAQUE PROJECTOR MOUNT (Set I - Mounting - Card 11)

DEFINITION: An opaque projector mount is a picture that is mounted on posterboard so that it can be used in an opaque projector. (All pictures, unless they are transparencies, are opaque, meaning you can't see through them.)

PERFORMANCE OBJECTIVE: Mount two pictures on posterboard, using an opaque mounting grid as a guide for positioning pictures.

STEP-BY-STEP PROCEDURES:

Read completely through all these instructions carefully at least once before you start this project.

1. Select a visual up to 11"x11" in size.
2. Prepare the visual for mounting, either with rubber cement or MT-5.
3. Cut a piece of poster board 11" x 14". Place the posterboard in a horizontal position as you prepare to mount a picture to it.
4. Mount the visual permanently on the posterboard, using MT-5, or rubber cement (in an 11"x11" area - to the right).
5. Any comments concerning the picture may be written on the left-hand side of the mounting board. The notes should not extend beyond 3" from the left.
6. When this mount is placed in an opaque projector, the three inch strip containing the notes will remain outside of the 11"x11" stage area within the projector. Even though this projector is used in a totally darkened room there is still enough light coming from the projector to illuminate the writing on the 3" strip extending out of 11"x11" stage area in the projector

HELPFUL HINTS:

1. Heat from the opaque projector may eventually deteriorate rubber cement, this is why it is best to mount visuals for the opaque projector with dry mount tissue (MT-5) if it is available.
2. As the projector faces the screen, the instructor stands to the right side of the projector but faces the audience and inserts the visual into the projector.
3. Printed information such as a short description from a magazine can be mounted on the left-hand side of the mounting instead of using hand-written notes.
4. When pictures are mounted using this technique they are in a correct position for projection and they will not vibrate when the projector fan is on.

MATERIALS NEEDED:

Visual - no larger than 11" x 11"
Posterboard (11" x 14")
MT-5 dry mounting tissue or rubber cement
Paper cutter or scissors
Hot press, tacking iron or hand iron

EVALUATION PROCEDURES:

The picture should be centered in the right-hand 11"x 11" portion of the posterboard.
The mounted visual should have all the qualities of a well-done dry mount or rubber cement mount.

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OPAQUE PROJECTOR MOUNT
(Set I - Mounting - Card 11)

OPAQUE PROJECTOR MOUNT
(Set I - Mounting - Card 11)

STEP-BY-STEP CARD FOR A TWO-PAGE MOUNT (Set I - Mounting - Card 12)

DEFINITION: This is a mounting that is made from a separated picture that has been printed one-half on two separate pages. (This is not a centerfold.)

PERFORMANCE OBJECTIVE: Mount a picture that has been printed partially on two pages by removing the unprinted paper in the middle then match and mount the two halves into a completed visual.

STEP-BY-STEP PROCEDURE:

Read completely through all these instructions carefully at least once before you start with this project.

1. Carefully remove pages from magazine (use a razor blade).
2. Trim center edges of picture very carefully with paper cutter or a razor blade or exacto-knife and a straight edge.
3. Butt the center edges of the picture together and with tacking iron, tack pages together on one single piece of dry mount tissue (MT-5). Then trim other edges of the picture so that the picture and tissue are exactly the same (on all four sides).
4. Position carefully on posterboard and tack dry mount tissue to posterboard.
5. Place in hot press at the proper temperature 225^{0} (use a cover sheet on top of the picture).

HELPFUL HINTS:

1. Have experience mounting 2 or 3 single pictures using dry mount tissue before you do this project.
2. Do not tear pages out of magazine--remove with razor blade or exacto-tool, or take the magazine apart by removing the staples.
3. Butt center of pictures together carefully. (This means edge to edge--not overlapping.)
4. Make sure the lines and patterns in the pictures match so they fit together well.
5. Choose pictures where the coloring on both pages match as close as possible.
6. Sometimes colored pencils or chalk, crayons, etc., can be used in order to better blend the edges together in the center (when needed).

MATERIALS NEEDED:

Pictures from magazine
Dry mount tissue (MT-5)
Scissors or paper cutter
Posterboard
Hot press
Tacking iron

EVALUATION PROCEDURE:

The center seam should be well matched and hardly noticeable. There should be no bubbles and all areas should be well pressed down. No dry mount tissue should show along any edges.

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TWO-PAGE MOUNT
(Set I - Mounting - Card 12)

TWO-PAGE MOUNT
(Set I - Mounting - Card 12)

STEP-BY-STEP CARD FOR PLASTIC BAG OR PLASTIC WRAP MOUNTING (Set I - Mounting - Card 13)

DEFINITION: Plastic Bag referes to those used to package bread or other materials or those used by the dry cleaner. Plastic Wrap refers to the thin, clear plastic that comes on rolls and is sold in grocery stores for wrapping foods, etc.

PERFORMANCE OBJECTIVE: Mount two or three pictures using plastic bags and plastic wrap as the mounting media in place of dry mounting tissue.

STEP-BY-STEP PROCEDURES:

Read completely through these instructions carefully at least once before you start this project.

1. Select visuals to be mounted. It is usually best to work with pictures no larger than 6"x8" until you have mastered this process.
2. Using the tip of the tacking iron tack the materials to the back of the visual. Use a small piece of Seal Release paper between the tip of the iron and the plastic wrap or plastic bag.
3. Trim picture with attached plastic so that picture and plastic are exactly the same size. Use cutting tool and straight edge for best results.
4. Place picture with the plastic on a cardboard mount, protect with A COVER SHEET OF SEAL RELEASE PAPER and place in hot press.
5. Leave in press for 40 to 60 seconds at 270°.
6. Remove and place under weight to cool.
7. If any edges remain unmounted, replace in the hot press again.

HELPFUL HINTS:

1. Static electricity can be created by rubbing the plastic with your hand and it will then stick to the picture as you trim.
2. It is best to trim the plastic with some of the picture inasmuch as the plastic by itself is usually difficult to cut and keep even.
3. Do not leave any plastic extending out beyond the picture.
4. This same process is followed when working with plastic bag or plastic wrap materials.
5. Remember by using Seal Release paper as a cover sheet you can prevent any plastic bag or wrap from sticking to the tacking iron or hot press.
6. Experiment using 2 or more thicknesses of plastic bag or plastic wrap. This technique helps this mounting process.
7. Try using plastic cleaning bags, bread wrappers, garbage bags, freezer bags, plastic wraps, produce bags, etc.

MATERIALS NEEDED:

Plastic bag
Plastic wrap
Cardboard for mounting
Tacking iron
Hot press
Scissors
Seal Release paper
Cutting tool
Straight edge

EVALUATION PROCEDURE:

The finished mounts should be flat with no wrinkles or bubbles and no plastic should be showing around edges of mounted pictures.

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DRY MOUNTING WITH PLASTIC BAG/WRAP
(Set I - Mounting - Card 13)

DRY MOUNTING WITH PLASTIC BAG/WRAP
(Set I - Mounting - Card 13)

STEP-BY-STEP CARD FOR MOUNTING WITH CLEAR ACRYLIC PLASTIC SPRAY (Set I - Mounting- Card 14)

DEFINITION: Clear acrylic plastic and some other materials that are in spray cans can be used as a mounting media for pictures when used with heat and pressure.

PERFORMANCE OBJECTIVE Mount two or three pictures using these mounting materials and techniques.

STEP-BY-STEP PROCEDURES:

Read completely through these instructions carefully at least once before you start this project.

1. Select pictures to be mounted. Pre-dry them and also pre-trim to desired mounting size.
2. Lay the picture face down on some newspaper. (Always do any spraying out of doors and always on newspaper. Spray paints, etc., are toxic to many people so never do any spraying in the labs or halls.)
3. (Out-of doors) Spray the back of the picture with five coats of clear plastic (or paint any color, or hair spray). Let each coat dry before spraying on the next one.
4. When the picture has at least five coats of clear spray plastic (or spray paint or hair spray), return to the lab and place the picture face up on the mounting posterboard.
5. Place a small cover sheet over the face of the picture and using the heat tacking iron to secure the picture to the posterboard in one small spot so the picture will not shift position during the mounting process.
6. Place the picture on the posterboard inside a folded cover sheet of seal-release paper and then into the hot press (set at 270^{0}) for 40 to 60 seconds. (The plastic, paint, or hair spray melts and adheres picture to posterboard under heat and pressure.

HELPFUL HINTS:

1. Choose a posterboard color that will add to your pictures.
2. Some spray materials for mounting may need more than five coats in order to adhere. (experiment)
3. Poloroid picture coating material may also be used for heat mounting. Just coat the back of a picture with the wipe-on plastic, let it dry, then follow the mounting procedures.
4. Try these mounting techniques using your electric hand iron (high heat). (Use seal-release paper)

MATERIALS NEEDED:

Pictures
Posterboard
Newspaper
Clear plastic spray
Spray paint
Hair spray
Poloroid picture coating material
Seal-release paper
Hot press
Tacking iron

EVALUATION PROCEDURES:

Your pictures should be smooth and flat with no bubbles or wrinkles. This technique should provide professional looking, permanently mounted pictures.

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CLEAR ACRYLIC PLASTIC SPRAY MOUNTING
(Set I - Mounting - Card 14)

CLEAR ACRYLIC PLASTIC SPRAY MOUNTING
(Set I - Mounting - Card 14)

STEP-BY-STEP CARD FOR HAND IRON MOUNTING WITH MT-5 DRY MOUNT TISSUE
(Set I - Mounting - Card 15)

DEFINITION: Mt-5 Dry Mount Tissue is a product by SEAL Co. Applied heat and pressure causes the tissue to adhere to the picture and to the cardboard. This mounting process can be done with an electric hand iron.

PERFORMANCE OBJECTIVE: Mount one or two professional looking pictures by using an electric hand iron and dry mounting tissue.

STEP-BY-STEP PROCEDURE:

Read complete through all these instructions carefully at least once before you start this project.

1. Set the hand iron at medium or wool (225°).
2. Tack MT-5 tissue to the back of the picture near the center with the tip of the hand iron.
3. Trim picture and the tissue together AT THE SAME TIME to the desired size and shape.
4. Position picture, face up, on the mounting cardboard.
5. Tack the tissue in two corners to the mounting posterboard with the tip of the hand iron.
6. Place cover sheet over face of picture (clean typing paper, seal release paper, or backing from self-adhesive plastic film.
7. Place on a hard smooth surface that the heat will not affect.
8. Iron from center to all edges, move slowly and apply considerable pressure.

HELPFUL HINTS:

1. Too high a temperature will cause bubbles to appear.
2. If picture doesn't stick, repeat process.
3. Do not use a padded surface such as an ironing board.
4. If you use your breadboard, lay it on the floor and cover with a few sheets of paper. This will keep the grease from the board from getting onto the poasterboard.

MATERIALS NEEDED:

Picture
MT-5
Posterboard
Electric hand iron
Cover sheet--or seal release paper
Hard smooth surface

EVALUATION PROCEDURE:

A neat mount with no bubbles and all edges should be anchored down. No dry mount tissue should show around edges of the mount. No grease or stains.

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DRY MOUNT TISSUE
HAND IRON MOUNTING
(Set I - Mounting - Card 15)

DRY MOUNT TISSUE
HAND IRON MOUNTING
(Set I - Mounting - Card 15)

EVALUATION PROCEDURE:

The Foto-Flat mount fastened to posterboard must be neat, clean and with no smears, loose edges or corners. Chartex mount should be even at the edges and still be flexible for rolling. No bubbles or loose edges.

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HAND IRON MOUNTING
FOTO-FLAT AND CHARTEX
(Set I - Mounting - Card 16)

HAND IRON MOUNTING
FOTO-FLAT AND CHARTEX
(Set I - Mounting - Card 16)

CUT... MOVE TO PROPER CARD

STEP-BY-STEP CARD FOR HAND IRON MOUNTING WITH FOTO-FLAT AND CHARTEX
(Set I - Mounting - Card 16)

DEFINITION: Foto-Flat and Chartex are two dry mounting methods that can be used for mounting by using heat and pressure. These products are produced by SEAL Co.

PERFORMANCE OBJECTIVE: Mount 2 or 3 photographs and other delicate items, such as a leaf, lace, or cloth with Foto-Flat by using a hand iron. Also reinforce the back of a small 8"x10" picture or small paper chart or map with Chartex using the hand iron.

STEP-BY-STEP PROCEDURE:

Read completely through all these instructions carefully at least once before you start this project.

FOTO-FLAT

1. Set the hand iron at Silk or a little lower (180^0, lowest setting).
2. Tack the Foto-Flat to the back of the photograph or material to be mounted with the tip of the hand iron.
3. Trim so that the Foto-Flat and the photograph to be mounted are exactly the same size.
4. Position the photograph on the cardboard then place a cover sheet over the mounting and iron with firm pressure from the center to the edges. Seal release paper is the best cover sheet.
5. Place mounting under a stack of books or magazines while the mount cools.

CHARTEX

1. Set the hand iron at a low medium heat (200^0).
2. Trim the Chartex so that it is exactly the same size as the picture, poster or chart that it will be attached to.
3. Place the visual face down on a clean hard surface; now place the smooth side of the Chartex against the back of the visual being reinforced.
4. Place a clean cover sheet over the back non-adhesive side of the Chartex and iron from the center to the edges with firm pressure.
5. The Chartex should stick to the back of the visual and not to the cover sheet if you had the proper surface down. Mounting materials will not stick to seal release cover sheets.
6. The visual should now be reinforced with a cloth backing.

HELPFUL HINTS:

1. Before doing this project with the hand iron, do the basic Chartex and Foto-Flat assignments using the hot press.
2. For a working area do not use a padded surface such as an ironing board but rather a hard flat surface that heat will not damage. Do not use the breadboard without covering it with paper; grease and oils damage materials.
3. Remember that Chartex is used as a reinforced backing for a visual so that it may be rolled up or folded without tearing.
4. Too much heat will blister and damage photographs.

MATERIALS NEEDED:

Chartex
Foto-Flat
Hand iron
Cover sheets, seal release paper
Posterboard for Foto-Flat mounts
Scissors
Hard, smooth working surface

STEP-BY-STEP CARD FOR HAND IRON MOUNTING WITH PLASTIC BAG OR PLASTIC WRAP
(Set I - Mounting - Card 17)

DEFINITION: Plastic Bag refers to those used to package bread or other materials or those used by the dry cleaner. Plastic Wrap referes to the thin clear plastic that comes on rolls and is sold in grocery stores for wrapping foods, etc. This is a technique of making permanent mountings with inexpensive materials.

PERFORMANCE OBJECTIVE: Mount two or three pictures using a plastic bag and plastic wrap as the mounting media in place of dry mounting tissue. Use the Electric hand iron.

STEP-BY-STEP PROCEDURES:

Read completely through these instructions carefully at least once before you start this project.

1. Temperature on the hand iron should be set at "linen" (highest heat).
2. Select visuals to be mounted. It is usually best to work with pictures no larger than 6"x8" until you have mastered this process.
3. Using the tip of the hand iron, tack the materials to the back of the visual and trim to correct size. Use a small piece of seal release paper between the tip of the hand iron and the plastic wrap or plastic bag in order to keep it from melting onto the iron.
4. Place picture with plastic on a posterboard, protect with a clean sheet of typing paper, or seal release paper, as a cover sheet.
5. Place on a hard smooth surface (like a breadboard or cutting board that won't be damaged by heat. Use newspapers on breadboard under the mounting materials in order to absorb and keep grease spots from soiling the posterboard and visuals.
6. Place the iron on the cover sheet which is over the picture and starting at the center, iron to all edges using consistent pressure and moving the iron slowly.
7. If any edges remain unmounted, place a cover sheet over picture and work edges down with hand iron again.

HELPFUL HINTS:

1. Static electricity can be created by rubbing the plastic with your hand and it will then stick to the picture as you trim.
2. It is best to trim the plastic with some of the picture inasmuch as the plastic by itself is usually difficult to cut. The best trimming can be done using a straight edge and a cutting tool.
3. Do not leave any plastic extending out beyond the picture.
4. This same process is followed when working with plastic bag or plastic wrap materials.
5. The hand iron will be set at a high temperature so keep it moving over the surface in order to keep from scorching the cover sheet. This process takes a little time in order to melt the plastic, so persist.
6. Do some testing with small scraps of plastic bags and wrap using scrap pictures before you attempt your final projects.
7. Experiment with more than one thickness of plastic bags and plastic wrap as the mounting material. This technique often helps this mounting process.

MATERIALS NEEDED:

Plastic bag
Plastic wrap
Cardboard for mounting
Electric hand iron

Scissors
Seal-release paper for cover sheets or backing paper from self-adhesive plastic film.
Plastic bags--usually obtained as cover materials for vegetables, bread, clothing, cleaning, etc.

EVALUATION PROCEDURE:

The finished mounts should be flat with no wrinkles or bubbles and no plastic should be showing around edges of mounted pictures.

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HAND IRON DRY MOUNTING
WITH PLASTIC BAG/WRAP
(Set I - Mounting - Card 17)

HAND IRON DRY MOUNTING
WITH PLASTIC BAG/WRAP
(Set I - Mounting - Card 17)

CUT... MOVE TO PROPER CARD

HELPFUL HINTS (Cont.)

8. Any lettering should be no smaller than 1/4" in size. It is best to use all capital letters.
9. Avoid using fancy lettering styles.

MATERIALS NEEDED:

Clear acetate or plastic
Marking pens, grease pencils
8 1/2"x11" paper
Mounting frame
Masking tape

EVALUATION PROCEDURE:

The finished hand-drawn transparency should be a good useable, readable visual for teaching some idea or concept. It should be mounted in a frame for use on the 10"x10" overhead projector, free from wrinkles.

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HAND-DRAWN TRANSPARENCY
(Set I - Transparencies - Card 45)

HAND-DRAWN TRANSPARENCY
(Set I - Transparencies - Card 45)

CUT... MOVE TO PROPER CARD

HELPFUL HINTS:

1. Polaroid picture-coating material can also be used as a coating for a picture transfer.
2. If the lift is still sticky, even after you have sprayed it with plastic (a plastic film lift usually is), you should mount it (sticky side down) onto a piece of clear acetate in order to protect the lift. This will keep it from sticking to other visuals in storage and on the stage of the overhead projector.

EVALUATION PROCEDURE:

Project the lift on the overhead projector. It should look clean and clear and free of any clay or spots. Check to see if other persons can readily identify the projected visual.

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CLEAR PLASTIC FILM LIFT
(Set I - Transparencies - Card 49)

CLEAR PLASTIC FILM LIFT
(Set I - Transparencies - Card 49)

CUT... MOVE TO PROPER CARD

STEP-BY-STEP CARD FOR A SEALAMIN LAMINATED MOUNT, PICTURE ONLY (Set I - Laminating - Card 18)

DEFINITION: To laminate a picture means to cover the picture with a protective film of clear plastic. This process protects and preserves visuals. The plastic film is applied with heat and pressure. (Seal-Lamin is the brand name of the versatile laminating film produced by the Seal Co.)

PERFORMANCE OBJECTIVE: Laminate 2 or 3 visuals with Seal-Lamin using the hot press.

STEP-BY-STEP PROCEDURE:

Read completely through these instructions carefully, at least once, before starting this project:

1. When using the new seal-lamin preheat hot press to 225^0 and not hotter than 240^0.
2. Select a picture about 6"x8". Place it in a newsprint cover sheet then put in the hot press for 5 seconds to predry picture.
3. Next, place the visual, face up, in between a cover sheet of Seal Release paper.
4. Cut a piece of Seal-Lamin about 1/2" longer and wider than the visual.
5. Place the Seal-Lamin, dull side down, on the face of the visual.
6. Smooth the Seal-Lamin over the visual with your hand. Static electricity will hold the sealamin in place over the visual and will also hold the picture to the seal release paper.
7. Close the cover sheet and place in the hot press for 30-40 seconds.
8. Remove the seal release paper containing the picture and place it under a seal weight to speed cooling and promote adhesion.
9. The laminated picture easily peals loose from the seal release paper. Attach a full sheet of MT-5 to the back of laminated picutre with the tacking iron.
10. Trim the visual with a paper cutter removing excess sealamin and mounting tissue. The laminated picture and the attached MT-5 should all be exactly the same size.
11. The visual is now ready to mount to posterboard using the procedures outlined on Step-by-Step Card No. 7.

HELPFUL HINTS:

1. Small wrinkles and air bubbles may sometimes be eliminated by pricking them with a small pin or making a small slice with a razor blade and then returning the visual to the hot press for additional heat and pressure (20 to 60 seconds).
2. Newsprint paper is a clean porous paper (without any printing) that will absorb moisture when used as a cover sheet in the hot press (for predrying pictures).
3. Seal-release paper is the best material to use as a cover sheet when laminating because it is coated with silica, thus mounting and laminating materials will not stick to it.
4. A laminated picture curls or bows with tension, this is why MT-5 should be used for mounting laminated pictures instead of rubber cement.
5. The best technique for trimming excess paper from a picture is by using a straight edge and a cutting tool.
6. A hand iron may also be used in applying Seal-Lamin (See Card No.22)
7. Old Sealamin should be used at 270^0. new Sealamin at 225^0--240^0.
8. Seal-lamin is a lightweight (.0015") (1 1/2 mil thick) durable polyester film coated on one side with adhesive. It is available with gloss or Matt finishes. Seal-lamin is also available in thicker sizes. (.005")(.010") (.015")(5-10-15 mil).

MATERIALS NEEDED:

Hot press
Seal-Lamin
Pictures
Cover sheets (newsprint and seal release paper)

(Materials Needed - cont.)

Paper cutter
Tacking iron
Seal Weight
Mounting tissue

APPLICATIONS:

Materials laminated with seal-lamin are waterproof, airtight and smearproof and can be stored flat, rolled, or folded. Laminating gives a permanent bond to most non-glossy or photographic papers. Laminating is excellent for pictures, posters, drawings, documents, identification cards, blueprints, cards, manuscripts, menus, amd boating or hiking maps and charts.

EVALUATION PROCEDURES:

Laminated and mounted visuals should be smooth and flat and be free from bubbles and wrinkles.

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SEAL-LAMIN LAMINATED MOUNT -(Picture Only)
(Set I - Laminating - Card 18)

SEAL-LAMIN LAMINATED MOUNT - (Picture Only)
(Set I - Laminating - Card 18)

CUT... MOVE TO PROPER CARD

lumpy items. Only very flat, smooth materials are used in the Wizard.

4. Never let any Seal-Lamin extend out from the edges of the special carriers that are used in the Wizard, otherwise the rollers can be damaged and gummed up.
5. Be accurate in your placing of the carriers in the Wizard. If they twist to one side or the other, they will rip and tear as they go through the Wizard. The carriers are rather expensive so be careful with them.
6. The Wizard carriers are made of semi-rigid cardboard that is coated inside with silica thus laminating materials will not stick to them. The carriers are similar to seal release paper but made of heavier material.
7. When laminating to (split a page) or (to make a lift) it is best to use the hot press instead of the Wizard because added time for heat and pressure is needed for these processes.

MATERIALS NEEDED:

Wizard laminator (18" wide or 12" wide)
Special carriers (various sizes)
Seal-Lamin
Scissors
Colored posterboard
Mounting tissue

EVALUATION:

The finished laminated pictures, whether laminated on just one side or on both sides, should be free from all bubbles and wrinkles. The carriers should also be left clean and free from any stains or tears.

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UING THE WIZARD LAMINATOR
(Set I - Laminating - Card 24)

USING THE WIZARD LAMINATOR
(Set I - Laminating- Card 24)

CUT... MOVE TO PROPER CARD

STEP-BY-STEP CARD FOR LAMINATING THE (WHOLE CARD) WITH SEAL-LAMIN
(Set I - Laminating - Card 19)

DEFINITION: Laminating the whole card means to cover the entire surface of the picture and posterboard surface with a protective film of Seal-Lamin.

PERFORMANCE OBJECTIVE: Cover a picture and the entire surface of the mounting card with Seal-Lamin laminating film using the hot press.

STEP-BY-STEP PROCEDURES:

Read completely through these instructions carefully, at least once before you start this procedure.

1. Follow the directions for drymounting with MT-5 (Card 7). When visual has been mounted, then proceed with these laminating directions.
2. Cut the film to fit the cardboard mount, wrapping any extra around to the back of the mount where it can be tacked with a tacking iron.
3. Laminating requires more pressure than dry mounting thus a sheet of masonite board or heavy chipboard (cardboard) should be placed under the sponge rubber pad in the hot press. The board should be the same length and width as the pad and not more than 1/4" thick.
4. Place a seal release cover sheet below and above the visual, insert in the press, set at 225^0 to 240^0.
5. If bubbles occur, prick them with a pin or slice them with a razorblade and apply more heat and pressure.
6. Place visual under weights to cool and to promote adhering.
7. Air bubbles show up as frosty areas. These usually form along the edge of the picture. You can work them out with the tacking iron.

HELPFUL HINTS:

1. If bubbles occur, prick with pin or cut with a razor blade, replace in hot press or use a clean tacking iron.
2. The tacking iron will usually need to be used to get rid of air pockets along the edge of the picture.
3. If the laminated card bows or curls, you can straighten it out by laminating the back side of the card or by rubber cementing the mounting to another card for reinforcement.
4. When working out bubbles, be sure you use the clean tacking iron that is only used for Seal-Lamin. (A tacking iron that has been used for drymounting tissue will stain the Seal-Lamin when used directly on it.)

MATERIALS NEEDED:

Visual
MT-5
Posterboard
Seal-Lamin
Hot Press
Seal release paper
Tacking iron
Cover sheets

EVALUATION PROCEDURE:

The Seal-Lamin should be adhered down to the visual and the card with no air bubbles showing along the edge of the laminated picture.

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SEAL-LAMIN LAMINATION (WHOLE CARD)
(Set I - Laminating - Card 19)

SEAL-LAMIN LAMINATION (WHOLE CARD)
(Set I - Laminating - Card 19)

STEP-BY-STEP CARD FOR LAMINATING SMALL LOOSE ITEMS (Set I - Laminating - Card 20)

DEFINITION: Small loose items can be small pictures near stamp size or larger or actual items such as seeds, spices, leaves, or any small item that can be held in place and covered with transparent laminating film. Do not use large lumpy items.

PERFORMANCE OBJECTIVE: Mount six or more small items to a posterboard by using only Seal-Lamin laminating film as the holding and mounting material.

STEP-BY-STEP PROCEDURE:

Read completely through these instructions carefully at least once before you start this project.

1. Select six or more small related objects or items and place them on the surface of a 11"x14" mounting cardboard. Be creative and try to select small items that will relate to your special area of interest.
2. Cut a piece of laminating film about 13"x16". (One inch longer and wider than the cardboard mount on all four sides.)
3. Lay the film over the items to be laminated and mounted, dull side down.
4. With the clean laminating tacking iron tack around items so as to hold them in place. If you are mounting small paper items, a tiny bit of glue stick will hold them in place while you prepare to laminate them.
5. Now turn the mount upside down so the back of the carboard mount is face-up on the table. Fold the excess laminating film on to the back of the mount and tack it to the back of the posterboard along all four edges.
6. Remove the cardboard or masoniteboard out of the hot press from beneath the pad so only the felt-covered rubber pad is in the press.
7. Now place your mount in between a newsprint cover sheet so it is completely covered on top and bottom and place it in the hot press for about 30 seconds (225^{0}). If any of the small loose items are a little bumpy, the pressure of the hot press will push them down into the pad, thus allowing better sealing over them and around them to take place.
8. Remove from hot press and with the tacking iron tack around any items where air bubbles still exist.

HELPFUL HINTS:

1. If the mounted visual curls or bends, it can be straightened out so it will again lay flat by either laminating the entire back of the card or else by rubber cementing the mount to a second card to add additional strength and stiffness to the mounted laminated materials.
2. Be creative in your choice of materials to be mounted. They should relate to instructional purpose and need.
3. Do not place any large lumpy items in the hot press because it can break or damage the press, instead use only the tacking iron or hand iron for laminating these types of items to the posterboard.

MATERIALS NEEDED:

The small loose items
Scissors
Tacking iron
Hot press
Laminating film
Mounting cardboard
Glue stick
Newsprint for cover sheet

EVALUATION PROCEDURE:

The finished project should be useful to the student and relate to some instructional area. There should be no excess air bubbles around mounted items.

LAMINATING SMALL LOOSE ITEMS
(Set I - Laminating - Card 20)

LAMINATING SMALL LOOSE ITEMS
(Set I - Laminating - Card 20)

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STEP-BY-STEP CARD FOR A SEALAMIN LAMINATED CUTOUT MOUNT (Set I - Laminating - Card 21)

DEFINITION: A Sealamin laminated cutout mount is a picture that has been covered with sealamin laminating film and then backed with Mt-5 and then trimmed with scissors, eliminating all the surrounding paper and leaving only the basic central part of the laminated picture.

PERFORMANCE OBJECTIVE: Make one or two sealamin laminated cutout mounts.

STEP-BY-STEP PROCEDURE:

Read through these instructions carefully at least once before you start this project.

1. Preheat the dry mounting press to 225^{0}, then predry visual in between newsprint cover sheets in hot press for 5-10 seconds.
2. Place visual face up on a sheet of seal release paper.
3. Cut a piece of Seal-Lamin and place the dul side of the sealamin over the face of the picture.
4. Smooth the sealamin down with your hand. Static electricity will hold the picture in place.
5. Place the visual in a seal-release cover sheet in the dry mounting press for 15-30 seconds.
6. Remove the visual from the press and let it cool under a weight.
7. Place the visual face down and attach a piece of dry mount tissue to the back of the picture.
8. Tack the dry mount tissue to the picture in at least three places.
9. Using scissors cut out the visual, cutting through both the laminated visual and the tissue at the same time.
10. Position the cutout on postboard.
11. Tack the dry mount tissue to the posterboard in at least two places, lifting the visual to do so.
12. Place the posterboard with the visual in a seal release cover sheet and place in the press for 15 seconds.
13. Remove the posterboard from the hot press and let the visual cool under a weight.

HELPFUL HINTS:

1. When cutting out pictures with small details it may be necessary to tack the MT-5 to the picture in several places.
2. When using the tacking iron, make small tacks (large ones can cause wrinkles).
3. A hand iron can also be used for this project.
4. Try to find a picture that provides some challenge in cutting out and in mounting.
5. Never use rubber cement to mount any cut out picture.

EVALUATION PROCEDURES:

No dry mount tissue should show around edges.
The mounted and laminated cutout should be free from wrinkles and bubbles.

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SEAL-LAMIN LAMINATED CUTOUT
(Set I - Laminating - Card 21)

SEAL-LAMIN LAMINATED CUTOUT
(Set I - Laminating - Card 21)

STEP-BY-STEP CARD FOR HAND IRON LAMINATION WITH SEAL-LAMIN (Set I - Lamination - Card 22)

DEFINITION: Hand iron lamination is a technique for protecting and preserving pictures by covering them with heat sensitive seal-lamin by using an electric hand iron.

PERFORMANCE OBJECTIVE: Laminate at least two pictures with Seal-Lamin using the electric hand iron (at your home).

STEP-BY-STEP PROCEDURE:

Read completely through all these instructions carefully at least once before you start this project.

1. Select a single page that contains a good usable picture (6"x8" or 8"x10"). Pre-dry it in between newsprint or typing paper with the hand iron for ten seconds in order to remove any moisture.
2. Place the picture face up on clean paper (newsprint or craft paper).
3. Cut a piece of Seal-Lamin about 1/2" larger than the picture that is to be laminated (length and width) and place over the face of the picture. (Seal-Lamin dull side down.) A little rubbing with your hand will create static electricity that will hold the film in place. The static electricity will also attract any lint or dirt in the area to the visual so work in a clean area.
4. With the iron, lightly tack the Seal-Lamin in the four corners to the paper. (DO NOT TACK THE SEAL-LAMIN TO THE FACE OF THE PICTURE, this will leave shiny spots.)
5. Set temperature of hand iron at cotton or a little lower heat. Protect picture with a seal-release cover sheet and press with hand iron until laminating film adheres to surface of visual.
6. Work on a hard flat surface not effected by heat. If you use a breadboard, cover it with newspaper because the grease will stain visuals.
7. After the picture is laminated, back it with MT-5, trim and then also mount the laminated picture with your hand iron.

HELPFUL HINTS:

1. If bubbles or wrinkles show up under the laminating film, they can be removed by using the hand iron directly on the Seal-Lamin surface (if it is clean). If this doesn't help, the bubble may be cut with a razor blade or cutting tool to let the air out then apply additional heat and pressure again.
2. Be sure you check the proper temperature. An iron that is too hot will blister the laminating film.
3. Use typing paper, craft paper, or paper towels as cover sheets when predrying.
4. Seal release paper is the best cover sheet, if available. The backing paper from clear, frosted, or printed self-adhesive plastic film (18" wide) is a fair substitute for seal release paper.

MATERIALS NEEDED:

Pictures
Electric hand iron
Seal-Lamin
Posterboard
Typing paper, etc. (under pictures)
Scissors
Seal release paper for cover sheets (over pictures)
MT-5

EVALUATION PROCEDURE:

The laminated finished project should be mounted and lay flat and be free from any bubbles, wrinkles or stains.

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HAND IRON LAMINATION (SEAL-LAMIN)
(Set I - Laminating - Card 22)

HAND IRON LAMINATION (SEAL-LAMIN)
Set I - Laminating - Card 22)

STEP-BY-STEP CARD FOR TWO-SIDED SEAL-LAMIN LAMINATION (MOUNTED)
(Set I - Laminating - Card 23)

DEFINITION: A two-sided Seal-lamin lamination, mounted is a technique for preserving and using pictures that are back-to-back on either side of a single page. This page is laminated on both sides and then mounted so that either side can be easily displayed.

PERFORMANCE OBJECTIVE: Laminate a page on both sides and then mount it for display. (Use all three mounting techniques.)

STEP-BY-STEP PROCEDURE:

Read completely through all these instructions carefully at least once before you start this project.

1. Select a single page that contains a good usable picture on both sides. Pre-dry it in the hot press in newsprint for ten seconds in order to remove any moisture. Trim the page removing unwanted paper around pictures.
2. At this point, there are three techniques that can be used in order to laminate a page on both sides with Seal-Lamin. (Try all three laminating methods.)

LAMINATING METHOD A: (one side at a time)

3. Place the trimmed picture in a clean folded sheet of seal release paper.
4. Cut a piece of Seal-Lamin about 1/2" larger than the picture that is to be laminated (length and width) and place the seal-lamin over the face of the picture. (seal-lamin dull side down). A little rubbing with your hand will hold the film in place. The static electricity will also attract any lint or dirt in the area to the visual so work in a clean area.
5. Place picture in the cover sheet in the hot press at 225^0-240^0 for 30 seconds.
6. When removed your picture should be free from bubbles and wrinkles. If there are any, work them out with the clean tacking iron used especially for this purpose or place your picture back into the hot press for another 30 seconds.
7. Whenever a visual is removed from the hot press it should be placed under a metal weight. This not only speeds cooling but assists proper adhering and helps to prevent curling of the visuals.
8. Trim the picture in order to remove extra Seal-Lamin.
9. Now place the side of the page that is not laminated face up into the seal release paper and again repeat steps 4 to 7.
10. When the second side is laminated remove from hot press, cool, then again trim away any excess Seal-Lamin. Now go to mounting procedures.

LAMINATING METHOD B: (two sides at the same time)

3. Place the trimmed picture in between a piece of Seal-Lamin that is wrapped around both sides of the page. The dull side of the film against the two surfaces of the page to be laminated. (This makes a sandwich of Seal-Lamin/ the page/Seal-Lamin.)
4. The Seal-Lamin should be just a little larger than the page it covers. Rubbing will create static electricity which will keep the seal-lamin in place around the picture.
5. Now place the sandwich in between seal release cover sheet and place in the hot press at 225^0. This lower temperature will allow the Seal-Lamin to adhere to the surfaces of the page slower and thus not cause wrinkles. Leave in the press for 45 to 60 sec.
6. Remove from hot press and cool under weights.
7. Turn the page over and repeat step 5.
8. Trim any excess Seal-Lamin from around the page and follow mounting procedures.

LAMINATING METHOD C: (two sides at the same time using the Seal-Wizard-roller-laminater) (Procedures described in Step-by-Step Card #24.)

MOUNTING PROCEDURES: (Three Techniques)

1. Use four photo mount corners and attach the two-sided laminated page to a 11"x14" cardboard.
2. Use four clear acetate strips (1" wide x 2" long) as the corner mounts which will hold the two-sided laminated page to posterboards.
3. The third way to mount or display the two-sided lamination is to make a center cutout cardboard frame for each side of the page and then rubber cement them to the surface of each side of the page. The visual is then ridged enough to stand by itself as it is displayed on a small tabletop easel.

HELPFUL HINTS:

1. If bubbles or wrinkles show up under the laminating film, they can be removed by using a CLEAN tacking iron or hand iron directly on the Seal-Lamin surface. If this doesn't help, the bubble may be cut with a razorblade or cutting tool to let the air out then apply heat and pressure again.
2. Be sure you check the proper temperature for the three methods.
3. When laminating the second side of a picture or when laminating both sides at the same time, if added pressure is needed in the hot press, use a pad of newsprint as a base on the rubber felt pad for needed pressure.
4. Old Seal-Lamin needs 270° (20 seconds). New Seal-Lamin needs 225° (40 seconds).

MATERIALS NEEDED:

A single page containing pictures on both sides
Hot press
Seal-Lamin
Posterboard
Four photo mounting corners
Clear acetate strips
Seal release paper for cover sheets
Scissors
Wizard laminator
Wizard carriers
Hand iron

EVALUATION PROCEDURE:

The finished project should lay flat and be free from any bubbles or wrinkles. It should be mounted and have a useful picture on both sides.

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TWO-SIDED SEAL-LAMIN LAMINATION (MOUNTED)
(Set I - Laminating - Card 23)

TWO-SIDED SEAL-LAMIN LAMINATION (MOUNTED)
(Set I - Laminating - Card 23)

EVALUATION PROCEDURES:
The finished project should lay flat and be free from any bubbles or wrinkles. It should be mounted and have a useful picture on both sides.

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TWO-SIDED LAMINATION, MOUNTED (CLEAR OR FROSTED) SELF-ADHESIVE PLASTIC FILM
(Set I - Lamination - Card 28)

TWO-SIDED LAMINATION, MOUNTED (CLEAR OR FROSTED) SELF-ADHESIVE PLASTIC FILM
(Set I - Lamination - Card 28)

CUT... MOVE TO PROPER CARD

STEP-BY-STEP CARD FOR USING THE WIZARD LAMINATOR (Set I - Laminating - Card 24)

DEFINITION: The Wizard is the brand name for a light-weight, desk-top laminator made by Seal Co. It utilizes heated rollers and automatically heats to approximately 225^{0} when turned on.
It is an excellent laminating machine. It supplements a hot press in a production lab but does not take the place of the hot press.

PERFORMANCE OBJECTIVE: Laminate several pictures with this machine. Some pictures with just one-side lamination and some pictures with two-side lamination.

STEP-BY-STEP PROCEDURES:

Read completely all these instructions carefully at least once before you start this project.

The following steps will present the process of two-sided lamination. (This is Lamination Method "C" required for Step-by-Step card #23.) This process is concerned with the use of the Seal-Wizard-Roller-Laminator and the special carriers that must be used with the Wizard.

1. Preheat the Wizard (this takes about 10 to 15 min.). The red light comes on when it has heated to the temperature needed for laminating.
2. Select a single page that has usable pictures on both sides of that single page.
3. Predry the picture, using a standard hot press and procedures described in previous Step-by-Step cards.
4. After predrying the visual, cover the picture on both sides with Seal-Lamin. (Dull side against the face of the pictures.)
5. Place this in a Wizard carrier. By rubbing the Seal-Lamin static electricity will be created which pulls the Seal-Lamin against the visual. Be sure no Seal-Lamin ever sticks out of the carrier for this would damage the Wizard rollers as the carrier moves through the machine.
6. Slide the carrier (containing your picture covered with Seal-Lamin) into the front slot of the Wizard until the rollers catch hold of the carrier and it starts rolling through. Keep the carrier perpendicular to the opening in the Wizard or else the Wizard will damage the carrier.
7. When the carrier emerges from the Wizard, turn the carrier over and send it through the second time. This will heat and laminate the second side of the picture.
8. This time when the carrier comes out of the Wizard, let it cool for one minute before you open the carrier and remove your picture which is now laminated on both sides.
9. Trim and remove any excess Seal-Lamin around the picture.
10. Mount this two-sided laminated picture using one of the three mounting methods described in the preceeding Step-by-Step card No. 23.

HELPFUL HINTS:

1. It is best to pre-dry pictures in a hot press in a newsprint cover sheet before laminating them with the Wizard.
2. Try laminating just one side of a picture using the Wizard. Modify the preceding Step-by-Step procedures by using laminating film on just one side of a page. When laminated the picture should be mounted with MT-5 using procedures outlined on card No. 7.
3. There are some items that are never used in the Wizard. (Grated crayon, heavy cardboard, small loose items, newspaper, construction paper, or

STEP-BY-STEP CARD FOR SPLITTING A PAGE WITH SEAL-LAMIN LAMINATING FILM
(Set I - Laminating - Card 25)

DEFINITION: Splitting a page is a technique for preserving and using pictures that are on either side of a single page. The page is laminated on both sides with Seal-Lamin and then split (separated) so that two separate pictures are the product of an original single page.

PERFORMANCE OBJECTIVE: Select a single page that contains usable pictures on both sides, laminate with Seal-Lamin on both sides then split the page and mount the two separate pictures so that they may be displayed at the same time. side by side.

STEP-BY-STEP PROCEDURES:

Read completely all these instructions carefully at least once before you start this project.

1. Select a single page that contains a good usable picture on both sides. Pre-dry the page in the hot press by placing it in between a piece of wrinkle free newsprint, then place in the hot press for 10 to 15 seconds at 225°.
2. Do not trim your picture until it is laminated.
3. Place the picture on a clean sheet of seal release paper that is free from stains and wrinkles.
4. Cut a piece of Seal-Lamin about 1/2" larger than the picture that is to be laminated (length and width) and place over the face of the picture. (Seal-Lamin dull side down.) A little rubbing with your hand will create static electricity that will hold the film in place. The static electricity will also attract any lint or dirt in the area to the visual so work in a clean place.
5. You will not need to tack the Seal-Lamin to the seal release paper. The static electricity will hold the film in place over the picture.
6. Place in hot press for 30 seconds at 225° to 240°.
7. Your picture should be free from bubbles and wrinkles. If there are any, work them out with the clean tacking iron used especially for this purpose or place your picture back into the hot press for another 30 seconds.
8. Whenever a visual is removed from the hot press it should be placed under a metal weight. This not only speeds cooling but assists proper adhering and helps to prevent curling of the visuals.
9. Trim the picture in order to remove extra Seal-Lamin. Now place the side of the page that is not laminated face up onto a piece of seal release paper and repeat steps 4 to 8 in order to laminate the second side of the page.
10. When the second side is laminated remove from hot press, cool, then again trim away any excess Seal-Lamin. It is important that the visual is trimmed back into the page at least 1/8" all around the picture before you attempt to split the page.
11. Using an X-acto knife, razorblade or fingernails, separate the two-sided laminated page at a corner and slowly pull the page apart into two sheets. When completed you should have split the single page entirely, into two separate visuals.
12. Another technique at this step is to apply a strip of 3/4" wide masking tape to both sides of a corner, then by pulling apart the two pieces of tape, the corner will separate and start the splitting process.
13. Mount the two pictures on posterboard using dry mount tissue.

HELPFUL HINTS:

1. If bubbles or wrinkles show up under the laminating film, they can be removed by using a CLEAN tacking iron or hand iron directly on the Seal-Lamin surface. If this doesn't help, the bubble may be cut with a razorblade or cutting tool to let the air out then apply heat and pressure again.
2. When laminating place a pad of newsprint on the rubber pad if added pressure is needed.
3. You will find that pictures when split with Seal-Lamin are rather thin and curl easily. The best way to mount them is with MT-5. Do not rubber cement pictures laminated with seal-lamin because they tend to pull loose around the edges.
4. Pages from the National Geographic, Ideals Magazine and the Arizona Highways are the type of pictures that seem to work best when splitting a page with Seal-Lamin.
5. Seal release paper is a product made by Seal Co. It is especially designed and treated so that mounting and laminating materials like Seal-Lamin and mounting tissue will not stick to it.

MATERIALS NEEDED:

A single page containing pictures on both sides
Hot press and tacking iron
Seal-Lamin
Posterboard
Paper cutter
Newsprint for predrying
Scissors
Seal release paper for cover sheets when laminating

EVALUATION PROCEDURE:

The finished two separate mounted pictures should lay flat. It is realized that most split pictures with Seal-Lamin may have some wrinkles because the paper is very thin, but do your best.

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SPLITTING A PAGE (SEAL-LAMIN FILM)
(Set I - Laminating - Card 25)

SPLITTING A PAGE (SEAL-LAMIN FILM)
(Set I - Laminating - Card 25)

EVALUATION PROCEDURES:

The finished laminations should be flat with no wrinkles and no large bubbles. Laminating with this type of material does give a frosted matt texture and appearance. it does not have the smooth appearance of seal-lamin but it is a good, inexpensive process. Tiny bubbles are normal.

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PLASTIC BAG/WRAP LAMINATING
(Set I - Laminating - Card 30)

PLASTIC BAG/WRAP LAMINATING
(Set I - Laminating - Card 30)

CUT... MOVE TO PROPER CARD

STEP-BY-STEP CARD FOR LAMINATING WITH CLEAR SELF-ADHESIVE PLASTIC FILM (Picture only)
(Set I - Laminating - Card 26)

DEFINITION: Clear plastic film is a commercial product usually 18" wide with a self-adhesive back. There are many producers of this product. It not only comes in many printed patterns and colors but also in transparent (CLEAR) and transparent (FROSTED). (Available in rolls and sold by the yard.)

PERFORMANCE OBJECTIVE: Laminate and mount two or three pictures using clear or frosted self-adhesive plastic film.

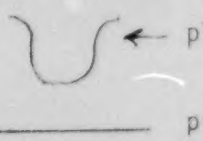
STEP-BY-STEP PROCEDURES:

Read completely through these instructions carefully, at least once before you start this project.

1. Trim picture (start with a picture not larger than 6"x6" until you have some experience working with this type of plastic film.
2. Use a clean working area free from dust, lint, paper scraps, etc., inasmuch as all these things will adhere to the sticky plastic film.
3. Place the picture to be laminated face up on a clean piece of seal release paper.
4. Cut film to desired size, (either clear or frosted).
5. Remove protective backing from plastic film and place the film, sticky side down, onto the surface of the picture.
6. Air bubbles will show up as white or frosted spots. These can be removed by rubbing with your fingernail or a spoon or a burnishing stick.
7. Tack MT-5 to the back of the laminated picture.
8. Trim away all excess plastic film and MT-5 from around the edges of the visual.
9. The visual should next be mounted to a cardboard. Place mounting in seal release cover sheet and into hot press for 10 seconds (225°).

HELPFUL HINTS:

1. Sometimes it helps to bow the film.



and make contact in the center first and then smooth down each side to the outer edges.
2. Do not leave in hot press for over 10 seconds.
3. This laminated picture can be mounted with rubber cement but allow extra time for the rubber cement to thoroughly dry (20 min.), on both surfaces so that all thinner in the rubber cement has evaporated. The thinner in rubber cement can loosen and blister the plastic film that is over the picture.

MATERIALS NEEDED:

Picture
Plastic film (clear or frosted)
Burnishing tool (spoon, comb, popcycle stick)
Hot press
Seal release paper

EVALUATION PROCEDURE:

This finished laminated mount should be flat, free from bubbles and wrinkles and have no MT-5 showing around the picture.

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LAMINATION WITH CLEAR OR FROSTED
SELF-ADHESIVE PLASTIC FILM
(Picture Only)
(Set I - Lamination - Card 26)

LAMINATION WITH CLEAR OR FROSTED
SELF-ADHESIVE PLASTIC FILM
(Picture Only)
(Set I - Lamination - Card 26)

STEP-BY-STEP CARD FOR A CLEAR SELF-ADHESIVE PLASTIC FILM LAMINATED CUTOUT MOUNT
(Set I - Laminating - Card 27)

DEFINITION: This cutout mount is a picture that is covered with clear self-adhesive plastic film then trimmed with scissors eliminating all the surrounding paper and leaving only the basic central part of the laminated visual.

PERFORMANCE OBJECTIVE: Make a cutout mount laminated with clear self-adhesive plastic film.

STEP-BY-STEP PROCEDURE:

Read completely through all these instructions carefully at least once before you start this project.

1. Select an appropriate picture that will look good as a cut-out mount. Find a picture that provides some challenge in cutting it out. Work in a clean area.
2. Cover picture with a piece of clear contact plastic film. Lay picture on hard smooth surface and rub the plastic with a burnishing stick in order to remove all air bubbles.
3. Cut MT-5 approximately the same size as picture.
4. Tack the MT-5 to the back of the picture with the tacking iron.
5. If there is a lot of detail to your cutout mount, you may need to tack the MT-5 to your picture in several places.
6. Cut out the laminated picture and MT-5 together as one unit using scissors or cutting tool.
7. Tack picture to mounting board.
8. While tacking picture, tack only the MT-5 to the board. (Never touch tacking iron directly to the surface of the laminated visual or you may melt or stain the plastic.)
9. Cover picture and mounting board with a clean newsprint cover sheet or seal release cover sheet in order to protect the surface.
10. Insert in hot press (225^{0}) and close for 5 seconds. (If you need to, replace for another 5 seconds.)
11. Remove from hot press and place under metal weight. This speeds cooling and helps the MT-5 adhere. The weight also prevents blisters and bubbles from forming on the mount.

HELPFUL HINTS:

1. Do not forget to cut MT-5 with the picture.
2. Be sure to tack the MT-5 to the picture.
3. Thicker pictures require more time in hot press.
4. When the cutout has detail, use a sharp cutting tool for cutting the picture and MT-5 together.
5. If any MT-5 shows outside the picture after mounting, use a razor blade and remove it.
6. A pair of small precision trimming scissors are very useful for cutout mounts.

MATERIALS NEEDED:

Visual
Clear self-adhesive plastic film
Colored posterboard
Clean paper
Scissors
Razor blade or cutting tool
Seal release paper
Hot press and tacking iron
MT-5 dry mount tissue
Clean popcycle stick

EVALUATION PROCEDURE:

Make sure there is no MT-5 showing around the cutout picture. Do not have any air bubbles or wrinkles in the cutout mount.

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CLEAR SELF-ADHESIVE PLASTIC FILM
LAMINATION CUTOUT MOUNT
(Set I - Lamination - Card 27)

CLEAR SELF-ADHESIVE PLASTIC FILM
LAMINATION CUTOUT MOUNT
(Set I - Lamination - Card 27)

STEP-BY-STEP CARD FOR TWO-SIDED LAMINATION, MOUNTED (CLEAR OR FROSTED) SELF-ADHESIVE PLASTIC FILM (Set I - Laminating- Card 28)

DEFINITION: A two-sided lamination mounted is a technique for preserving and displaying pictures that are on either side of a single page. This page is laminated on both sides and then mounted so that either side can be easily displayed. Clear or frosted plastic film is a transparent material with a self-adhesive backing. It is 18" wide and is usually sold by the yard.

PERFORMANCE OBJECTIVE: Laminate a page on both sides with clear or frosted transparent plastic film and then mount it for display.

STEP-BY-STEP PROCEDURE:

Read completely through all these instructions carefully at least once before you start this project.

1. Select a single page that contains a good usable picture on both sides. Trim the page removing unwanted paper.
2. Lay the visual on a clean flat surface free from dust or lint. Cut two pieces of clear or frosted transparant self-adhesive plastic film just slightly larger than the visual being laminated.
3. Separate the paper covering from the back of one piece of plastic film and place it over the visual. Turn the visual over and repeat the process with the second piece of plastic film.
   *As the paper covering is removed from the film, static electricity is created in the plastic and the film will draw onto it any lint, dirt or other small items in the area which will adhere to the plastic and be mounted over your visual (SO BE CAREFUL) and work in a clean area.
4. Trim any excess plastic film from around the page.
5. Rub the plastic down with a burnishing stick in order to remove any air bubbles, or place in the hot press in a cover sheet for 5 seconds to help make the film lay flat and smooth.
6. Use four photo mount corners and attach the two-sided laminated page to a 11"x14" cardboard or else mount the picture using the other techniques described in helpful hint No. 2.

HELPFUL HINTS:

1. If bubbles or wrinkles show up under the laminating film, they can be removed by using a burnishing stick on the surface.
2. An interesting way to mount or display this two-sided lamination is to make a cutout cardboard frame for each side of the page and then rubber cement it to the surface of each side of the page. The visual is then rigid enough to stand by itself as it is displayed on a Table Top Easel. The use of clear acetate corners is a third way to mount a two-sided laminated mount.
3. You could laminate one side of the visual with clear plastic film and the reverse side with frosted film. Remember, however, that the frosted will not always look good on all visuals. Winter scenes look especially nice under frosted plastic film.
4. There are several different patterns of frosted plastic so look before you buy.

MATERIALS NEEDED:

A single page containing pictures on both sides
Clear or frosted plastic film
Posterboard
Four photo mounting corners
Acetate strips for corner mounts
Scissors
Hot press
Paper cutter

STEP-BY-STEP CARD FOR SPLITTING A PAGE USING CLEAR OR FROSTED SELF-ADHESIVE PLASTIC FILM (Set I - Lamination - Card 29)

DEFINITION: Clear or frosted film is a commercially produced self-adhesive coated plastic, 18" wide with 25 yards to a roll and can be purchased by the yard. Splitting a page is a technique for separating pictures that originally were back-to-back on a single page.

PERFORMANCE OBJECTIVE: Using two pieces of clear or frosted self-adhesive plastic film, split a single page into two separate pictures and then mount them side by side.

STEP-BY-STEP PROCEDURES:

Read completely through all these instructions carefully at least once before you start this project.

1. Select a page that contains a good usable picture on both sides.
2. Peel the backing paper from the adhesive plastic and place sticky side down onto the surface of the picture.
3. Repeat step 2 so that both sides of the picture are laminated with plastic film.
4. Place a cover sheet over lamination and rub contact film down onto the page using the back of a comb or a burnishing stick until good contact is made.
5. After both sides of the visual have been covered with the clear plastic film, trim back into the page 1/8" all around the visual.
6. Next, place this laminated picture in between a seal release cover sheet and then into the hot press and heat each side for 5 seconds.
7. At this point it is best to let the two-sided lamination set overnight. This gives the heat activated adhesive time to start working so it will stick better and not pull loose.
8. Using an x-acto knife, razor blade or fingernails, separate page at a corner and slowly pull them apart. When completed you should have split the picture entirely, having two separate visuals.
9. Another way to split a page is to apply a strip of 3/4" wide masking tape to both sides of a corner. Then by pulling the two pieces apart, the corner will separate and start the splitting process.
10. Mount the two visuals on posterboards, using MT-5.

HELPFUL HINTS:

1. You may want to use clear plastic film on one side and frosted plastic film on the second side.
2. Select the right color of posterboard to enhance your visuals. The wrong color can detract from its effectiveness.
3. Rubber cement is not a good material for mounting these split pages because the thinner in the cement moves through the thin paper fibers and loosens and blisters the plastic and it separates from the picture.

MATERIALS NEEDED:

Two sheets of plastic self-adhesive film
Two sheets of posterboard
One visual, (pictures on both sides)
Hot press
Seal release paper
Masking tape strips
Mounting tissue MT-5
Comb or burnishing stick

EVALUATION PROCEDURE:

The finished mounts should be free from bubbles and wrinkles and flat along the edges. MT-5 should not show around mounted pictures.

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CLEAR/FROSTED PLASTIC SELF-ADHESIVE FILM (SPLIT-PAGE MOUNTS) (Set I - Laminating - Card 29)

CLEAR/FROSTED PLASTIC SELF-ADHESIVE FILM (SPLIT-PAGE MOUNTS) (Set I - Laminating - Card 29)

STEP-BY-STEP CARD FOR PLASTIC BAG OR PLASTIC WRAP LAMINATING (Set I - Laminating - Card 30)

DEFINITION: Plastic Bags refers to those that are clear and transparent that are used by the dry cleaner, bread bags, sandwich bags, etc. Plastic Wrap refers to the thin, clear plastic that comes on rolls and is in grocery stores for wrapping foods, etc.

PERFORMANCE OBJECTIVE: Laminate two or three pictures using plastic bags and plastic wrap as the laminating materials in place of seal-lamin or clear plastic films.

STEP-BY-STEP PROCEDURES:

Read completely through these instructions carefully at least once before you start this project.

1. Select pictures to be laminated but do not pre-trim them. It is usually best to work with pictures no larger than 6"x8" until you have mastered this process.
2. Pre-dry the picture inside a folded cover sheet of Newsprint.
3. Lay the picture face up inside a folded cover sheet of seal-release paper.
4. Lay the plastic wrap or plastic bag over the face of the picture. Rub the plastic with your hand and static electricity will then hold the plastic in place.
5. Fold the seal-release cover sheet over the plastic and picture and place in the hot press for 40 to 60 seconds at 270^{0}.
6. Remove and place under a weight to cool.
7. Next attach MT-5 or plastic bag to the back of the laminated picture, trim and mount to a posterboard.

HELPFUL HINTS:

1. Some plastic wraps may take more than one minute in the press and sometimes you may find some plastic wraps that will not adhere.
2. You may want to mount your picture with plastic wrap or plastic bag and then laminate over the picture and the whole card instead of just laminating the picture only as is described in the step-by-step procedures.
3. The best way to trim the picture is by using a straight edge and a cutting tool on a heavy cutting cardboard.
4. Always use seal-release paper because it is the only type of cover-sheet that plastic wrap and plastic bag will not stick to. The backing from the clear self-adhesive plastic film can work, however, as a fair substitute for seal-release paper, if needed.
5. Try experimenting with two or more thicknesses of plastic bags or plastic wrap as the laminating film.
6. Experiment with all types of clear, thin plastic bags and wrap. (bread wrappers, cleaning bags, food freezer bags, sandwich bags)(the air bubble plastic used as a packing material works well over water or winter scenes but takes about two minutes to cook down in the press.
7. Also try these techniques using your electric hand iron at home or in your classroom.

MATERIALS NEEDED:

Plastic bags
Plastic wraps
Posterboard for mounting
Hot press set at 270^{0}
Tacking iron
Scissors or cutting tool
Seal-release paper
MT-5 dry mount tissue

STEP-BY-STEP CARD FOR MAKING AN ACETATE POCKET (Set I - Laminating - Card 31)

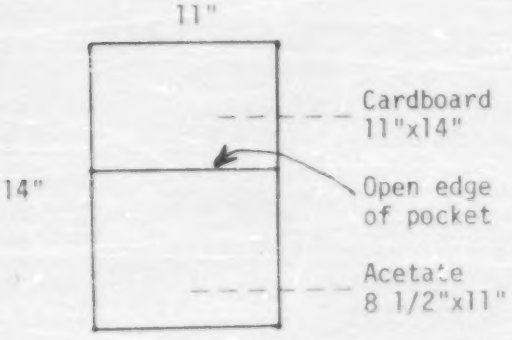
DEFINITION: An acetate pocket is a piece of acetate or heavy plastic that is mounted to a cardboard backing on three sides leaving one side open so as to be able to place pictures or papers within the pocket for display.

PERFORMANCE OBJECTIVE: Make an acetate pocket no smaller than 8 1/2"x11".

STEP-BY-STEP PROCEDURES:

Read completely through these instructions carefully at least once before you start this project.

1. Select a mounting cardboard 11"x14", any color.
2. An acetate pocket can be any size, however, for this project select a piece of acetate 8 1/2"x11".
3. Place a strip of 1/2" tape along one of the 11" sides of the acetate so you end up with about 1/4" on either side along the 11" side. This tape will be on the open edge of the pocket and it reinforces the acetate and helps to prevent tearing of the acetate as the pocket is used.
4. Place the mounting cardboard in a vertical position color side up. Next lay the acetate on the cardboard so that untaped 11" edge of the acetate is aligned with the bottom edge of the cardboard. (See diagram).



5. Next tape the acetate to the cardboard along the two sides and the bottom. The tape should be lapped evenly on the front of the acetate and the back of the cardboard.
6. You may want to put metal eyelets in the upper two corners of the cardboard.

HELPFUL HINTS:

This process can be thought of as a type of laminating because pictures used in the packet are covered with a protective film.

1. The tape should be 1/2" or 3/4" in width and can be either plastic tape, cloth tape, or strapping tape.
2. The pocket can be used by placing it on an easel, pinning it to a bulletin board or by attaching its own folding easel to the cardboard backing.
3. The space on the cardboard above the acetate can be used for a written message or title that relates to the pictures or material being displayed in the pocket.
4. The pockets can be made from clear sheets of heavy acetate, storm window plastic or even plastic wrapping materials.

MATERIALS NEEDED:

Acetate
Mounting cardboard
Tape
Eyelet materials
Scissors

EVALUATION PROCEDURE:

The acetate pocket should lay flat against the cardboard and be open at the top.

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ACETATE POCKET
(Set I - Laminating - Card 31)

ACETATE POCKET
(Set I - Laminating - Card 31)

STEP-BY-STEP CARD FOR PODGE LAMINATION (Set I - Laminating - Card 32)

DEFINITION: Podge Lamination is the process of covering a picture with commercial art podge or white glue.

PERFORMANCE OBJECTIVE: Laminate a picture with white glue so that it resembles a textured painting.

STEP-BY-STEP PROCEDURES:

Carefully read through these instructions at least once before starting this project.

1. Select a picture or art print. (Choose a picture on fairly heavy paper.) Mount the picture first with MT-5 to a cardboard, then trim to desired size. The picture is easier to work with when mounted.
2. Cover entire surface of picture with undiluted white glue. Spread out with your finger or a brush until completely covered.
3. Work glue over surface of picture occasionally. When it begins to set up, work glue upward with lifting motion of fingers or brush, until it holds some pattern or texture.
4. Allow picture to dry overnight, or at least 5 hours.
5. If proper appearance is not achieved with one coat, apply more glue and go through steps 2-3-4 again. It may be necessary to apply even a third coat. Be sure to allow glue to dry thoroughly between coats.
6. A textured effect can be achieved by placing a damp textured paper towel over the glue, let it set a a few minutes and then remove.
7. Mount the pre-trimmed dry podge to a second posterboard using rubber cement.
8. Sometimes a cardboard mat frame mounted around the podge adds a finishing touch.

HELPFUL HINTS:

1. It is possible to damage the surface of the picture if the glue is worked when too dry.
2. Allow glue to dry thoroughly between each application (at least five hours).
3. Pictures of water, sky, clouds, grass, look especially nice as a podge mount.
4. Mounting the picture first keeps it from excessive wrinkling or curling when wet with glue.
5. A three-dimensional effect can be obtained by applying extra coats of glue just to certain parts of the picture in the foreground area.
6. Podging an assembled jigsaw puzzle makes an effective and creative visual.

MATERIALS NEEDED:

Picture of any size
White glue
Brush
Mounting board
Mounting tissue
Textured paper towel
Dry Mount tissue
Hot Press or Hand Iron

EVALUATION PROCEDURE:

The podging should be thick enough to give a textured appearance so that the picture looks similar to an oil painting when finished.

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PODGE LAMINATION
(Set I - Laminating - Card 32)

PODGE LAMINATION
(Set I - Laminating - Card 32)

STEP-BY-STEP CARD FOR STORM WINDOW LAMINATION (Set I - Laminating Card 33)

DEFINITION: A storm window lamination is a process of covering a picture with storm window plastic.

PERFORMANCE OBJECTIVE: Protect a visual by covering and securing storm window plastic over the picture.

STEP-BY-STEP PROCEDURE:

Read completely through all these instructions carefully at least once before you start this project.

1. Dry mount the picture to a posterboard.
2. Cut storm window plastic a little larger than the posterboard.
3. Place the plastic over the complete mount leaving one inch extra that is folded and wrapped around to the back of the picture where it is secured with masking tape.
4. Stretch and tape two adjoining sides to the back then stretch and tape the other two sides.

HELPFUL HINTS:

1. Work on a clean surface.
2. When fastening the tape to the back of the mount, secure two adjoining sides, then stretch plastic to remove wrinkles before fastening the other two adjoining sides with tape. (Not too tight or you can bow or curl the mount.)
3. This laminating technique requires no heat for laminating or special tools but still it protects the picture with a protective film.
4. You may use light, medium or heavy-weight clear stormwindow vinyl plastic.

MATERIALS NEEDED:

Map, chart, picture or other visual
Cardboard
Mt-5 Dry Mount tissue
Hot Press or Hand Iron
Storm window plastic
Masking tape
Scissors

EVALUATION PROCEDURES:

The finished laminated mount should be smooth and clear. Laminating should not distract from the visual.

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STORM WINDOW LAMINATION
(Set I - Laminating - Card 33)

STORM WINDOW LAMINATION
(Set I - Laminating - Card 33)

STEP-BY-STEP CARD FOR CUT-OUT LETTERING (Set I - Lettering - Card 34)

DEFINITION: Cut-out lettering is the process of making letters or alphabet styles or patterns by cutting the letters out of paper, cardboard or other material.

PERFORMANCE OBJECTIVE : Make a lettered sign or poster by cutting out letters you have drawn or traced.

STEP-BY-STEP PROCEDURES:

Read completely through all these instructions carefully at least once before you start this project.

1. Choose a lettering style and size that will meet the needs of your lettering project.
2. The letters can be drawn or traced onto paper, cardboard, self-adhesive plastic film, cloth, burlap, alumnium foil, wood, leather, carpeting scraps, wrapping paper, fabric, yarn, furnace filters or any flat or three dimensional material that would look interesting when cut out into the shape of letters.
3. Cut out the letters and mount them onto a sign or a poster. A picture can be part of the sign or poster.
4. If your letters on the sign or poster are made out of paper or thin material, you may want to cover the lettering with wrinkled Seal-Lamin or clear or frosted self-adhesive plastic film for added protection or for water proofing if the sign is to be used outdoors.

HELPFUL HINTS:

1. Existing pre-cut letters, stencils, the Unistencil or any other type of letters or lettering technique may be used as a pattern for the letters.
2. The cut-out letters can be mounted to any surface you desire by using paste, white glue, epoxy, rubber cement, tile adhesive or any good mounting materials or technique.
3. Signs or posters designed for outdoor use can also be sprayed or painted with clear plastic, varnish or lacquer.
4. Try to produce something creative and useful using interesting cut-out letters and mounting techniques.

MATERIALS NEEDED:

These will vary depending upon individual needs.

Lettering patterns
Drawing materials
Material to be cut into letters
Mounting material
Cutting tools

EVALUATION PROCEDURES:

The finished project should be neat, clean, well done and the lettered message should be useful and easily read.

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CUT-OUT LETTERING (Handmade)
(Set I - Lettering - Card 34)

CUT-OUT LETTERING (Handmade)
(Set I - Lettering - Card 34)

STEP-BY-STEP CARD FOR THREE DIMENSIONAL LETTERING (Set I - Lettering - Card 35)

DEFINITION: Three dimensional lettering is a technique for producing creative non-flat signs, charts or messages using numerous items, such as, wood, cardboard, styrofoam, yarn, seeds, pipecleaner, etc.

PERFORMANCE OBJECTIVE: Make a sign with three or more words using any type of three dimensional materials.

STEP-BY-STEP PROCEDURES:

Read completely through these instructions carefully at least once before you start this project.

1. Prepare a sketch of the poster or sign (check spelling).
2. Select the 3-D lettering materials you plan to use.
3. Make and organize letters for the sign onto a posterboard or a wood base.
4. Most letters can be fastened into place with one or two coats of white glue or epoxy cement.

HELPFUL HINTS:

Othe

1. Other suggested three dimensional items that may be used are: popcorn, furnace filter material, sticks, shells, ribbon, string, small styrofoam packing chips, bark, rocks, etc.
2. Signs or posters designed for outdoor use can be sprayed or painted with clear plastic, varnish or lacquer.
3. Try to produce a sign that is both creative and useful using interesting 3-D materials and mounting techniques.

MATERIALS NEEDED:

Three dimensional lettering materials
Base mounting materials
Epoxy or white glue
Posterboard

EVALUATION PROCEDURE:

The finished sign should be well made. The 3-D items must be anchored securely. The sign should be easily read.

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THREE DIMENSIONAL LETTERING
(Set I - Lettering - Card 35)

THREE DIMENSIONAL LETTERING
(Set I - Lettering- Card 35)

EVALUATION PROCEDURE:

The accordion book should look clean and neat. It must also have well mounted related pictures, with smooth, even hinges, and have an even number of mounts (six to twelve). All edges should be even when folded shut.

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ACCORDION BOOK
(Set I - Display - Card 53)

ACCORDION BOOK
(Set I - Display - Card 53)

CUT... MOVE TO PROPER CARD

STEP-BY-STEP CARD FOR PRE-CUT LETTERS (Set I - Lettering - Card 36)

DEFINITION: Pre-cut lettering refers to any manufactured or ready-made commercial letters. The letters may be made of plastic, tile, vinyl, wood, metal, paper or cardboard.

PERFORMANCE OBJECTIVE: Make a desk sign or a door sign using any type of pre-cut commercial letters.

STEP-BY-STEP PROCEDURES:

Read completely through all these instructions carefully at least once before you start this project.

1. Make this sign with your name on it so you can use it in your classroom as a desk sign or a door sign.
2. The following specific directions will pertain to the use of pre-cut light-weight cardboard, or vinyl, stick-on letters.
3. On a piece of scratch paper pencil out the letters you will need for your sign.
4. Select the letter size and color you desire. In most cases, it is best to stay to the same letter style and color.
5. Make light pencil guide lines upon the mounting surface, then arrange and stick down the letters to the surface. Check your spelling.
6. It often helps to place a weight upon the letters while they are drying.
7. Within a few days or weeks some stick-on letters may become loose or fall off the sign, so it is suggested that you cover your finished door or desk sign with wrinkled Seal-Lamin.

HELPFUL HINTS:

1. An attached easel can be placed on the desk sign.
2. Sometimes a little grated crayon placed around the letters prior to laminating with the Seal-Lamin also adds interest to the finished sign.
3. Laminating with Seal-Lamin can also be done with the hand iron.
4. Rubber cementing a second posterboard (just slightly larger) to the back of your name sign can add more firmness to your sign and a contrasting border color.
5. Use colors that have high contrast.

MATERIALS NEEDED:

Pre-cut letters
Mounting cardboard
Seal-Lamin
Hot press or electric hand iron
Rubber cement

EVALUATION PROCEDURES:

The finished sign should be creative, neat, clean, well done, useful and easily read.

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PRE-CUT LETTERING
(Set I - Lettering - Card 36)

PRE-CUT LETTERING
(Set I - Lettering - Card 36)

STEP-BY-STEP CARD FOR SPRAY LETTERING (Set I - Lettering - Card 37)

DEFINITION: Spray Lettering is an easy, fast and effective lettering technique. It is done by laying letters flat on cardboard and spraying with paint, tempra color, or dabbing color around letters with a sponge.

PERFORMANCE OBJECTIVE: Make one or two signs or visuals using cut-out letters and any of the spray lettering techniques. (8 words or more)

STEP-BY-STEP PROCEDURES:

Read completely through these instructions carefully at least once before you start this project.

1. Prepare a sketch of the poster or sign.
2. Position letters for sign on posterboard. Double check your spelling. Letters should be aligned with a ruler or straight edge if they are to appear in a line. Commercially prepared letters are the best type for this technique, because they are usually made of die-cut thick sponge rubber or lead letters, and will not shift or move when sprayed.
3. If a visual is to be a part of the sign and it is not to be sprayed, make a shield for the area to be covered. (Newsprint may be used, but it must be weighted against the force of the spray.
4. Sprayed-on color should not be a filled-in solid color, but rather just a light indication of the sprayed color.
5. Spray on color, holding the spray can about 12 inches away, at right angles, spraying back and forth to insure even coverage. Let dry 10 minutes.
6. To prevent clogging, clear spray can when done, by turning can upside down and spraying short jets to clear the air passage.
7. If you desire, laminate your sign with clear sealamin, wrinkled sealamin or clear or frosted contact paper. This keeps the paint from smearing.
8. Be sure you use the special spray paint made for the rubber letters if you use them. Any other type of spray paint will damage the rubber letters.
9. Most any type of spray paint works well with the lead letters.

HELPFUL HINTS:

1. Before spraying, be sure that you shake the can of paint thoroughly to avoid the paint spraying out in dots or splotches.
2. Test spray on a sample sheet to get the feel of the covering quality of the spray paint and to avoid an initial extra heavy jet of paint.
3. Always spray out of doors and always use newspaper. Never do any spraying in the labs or halls. Spray paint is toxic to many people.
4. Do not over-spray; a light film is all that is necessary for an attractive poster. The spray paint should not totally cover the original color of posterboard.
5. A 3-D effect can be produced by spraying at about a 45-degree angle staying at the same angle as you spray. This will give a shadow effect to the sprayed letters.
6. Be sure that the paint is dry before removing letters.
7. Clean spray can and clear air passage as described in Step 6.
8. A variety of colors may be used to achieve different effects.
9. Simple Gothic lettering is most easily read.

MATERIALS NEEDED:

Pre-cut letters and symbols
Spray paint
Posterboard
Newsprint or newspaper

EVALUATION PROCEDURE:

Lettering should be readable and spaced correctly.
Do not use too much paint.
A good sign is not cluttered with too many words.

SPRAY LETTERING (Set I - Lettering - Card 37)

SPRAY LETTERING (Set I - Lettering - Card 37)

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STEP-BY-STEP CARD FOR STENCIL LETTERING (Set I - Lettering - Card 38)

DEFINITION: Stencil Lettering is a simple technique of lettering using cut-out lettering guides.

PERFORMANCE OBJECTIVE: Use Stencil lettering guides and make a sign using eight words or more.

STEP-BY-STEP PROCEDURES:

Read completely through these instructions carefully at least once before you start this project.

1. Draw light pencil guide lines on the material to be lettered. Guide lines will be erased after lettering has been completed.
2. Position guide on lettering surface and line up indicator holes on pencil guide lines.
3. Trace first letter; then make a light pencil dot through indicator holes at upper right of letter traced.
4. Move stencil to the next desired letter, lining up indicator holes on guide line making certain the pencil dot from the previously traced letter appears in the indicator hole at the upper left of desired letter.
5. Repeat Step 3 until each letter has been traced. To obtain the proper space between words, skip one set of indicator holes before starting the next word.
6. Fill in the open area of letter if desired, using colored pencil. This will make the lettering more readable.

HELPFUL HINTS:

1. To make sure that the best lettering is done, practice 10 or 15 minutes with the lettering guide before beginning your project.
2. A fine line felt tip pen marker also works well.

MATERIALS NEEDED:

Stencil lettering guide
Ruler
Colored pencils
Pencil

EVALUATION PROCEDURE:

Lettering should be neat, readable and well spaced, with no misspelled words.

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STENCIL LETTERING
(Set I - Lettering - Card 38)

STENCIL LETTERING
(Set I - Lettering - Card 38)

EVALUATION PROCEDURES:

The finished transparency should have clean, clear, sharp lines, readable lettering, and be mounted free from wrinkles.

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HAND-MADE MASTER
THERMOFAX TRANSPARENCY
(Set I - Transparencies - Card 46)

HAND-MADE MASTER
THERMOFAX TRANSPARENCY
(Set I - Transparencies - Card 46)

CUT... MOVE TO PROPER CARD

STEP-BY-STEP CARD FOR UNISTENCIL LETTERING (Set I - Lettering - Card 39)

DEFINITION: As the name implies the Unistencil lettering technique is a simple single lettering template or stencil that can be traced in varying ways in order to produce all 26 letters.

PERFORMANCE OBJECTIVE: Make a set of Unistencil Templates of varying sizes and then letter at least eight words using two different sized templates.

STEP-BY-STEP PROCEDURES:

Read completely all these instructions carefully at least once before you start this project.

1. Obtain a copy of the ditto handout material which contains the patterns for a 2", 3", 4", 5" and 7" unistencil. The handout also illustrates how to use a unistencil to make all the capital letters.
2. Use dry mount tissue or rubber cement in order to secure the printed patterns to a piece of heavy cardboard. The five cardboard patterns can then be cut out with a razor blade or some other cutting tool.
3. Draw a light baseline with a pencil along a straight edge on which the unistencil can be aligned as you trace the letters in your message.
4. Trace the basic form for each letter in your message using the unistencil.
5. Finish each letter by drawing in the additional necessary lines that are needed even though they may not be part of the unistencil.
6. The best spacing between letters is done optically rather than by some mechanical technique.
7. After your words are formed, the letters can be filled in, which will add to their readability.
8. Use at least two different sizes of unistencil in this lettering assignment.

HELPFUL HINTS:

1. You may make your set of unistencil patterns out of heavy cardboard, heavy acetate, plastic, thin plywood or thin masonite.
2. Check the spelling in your message. It is not difficult to skip or leave out a letter or to make the wrong one.
3. The unistencil does not give a full pattern for most letters. In most all cases you will have to fill in part of the letter by hand. The unistencil does give you a pattern for standard height and width for each letter.
4. You may want to cover your lettered message with Seal-Lamin or clear or frosted plastic film for protection and preservation.
5. The style of lettering produced by the unistencil is a bold, straight line GOTHIC.

MATERIALS NEEDED:

Unistencil handout
Rubber cement or MT-5
Heavy cardboard
Razor blade or cutting tools
Writing paper or cardboard
Laminating materials
Lettering pens and writing materials

EVALUATION PROCEDURES:

The finished message should be readable. Letters should be clear, clean and neat with sharp lines and edges. The unistencil patterns should be well made and firm enough to provide many months of useful service.

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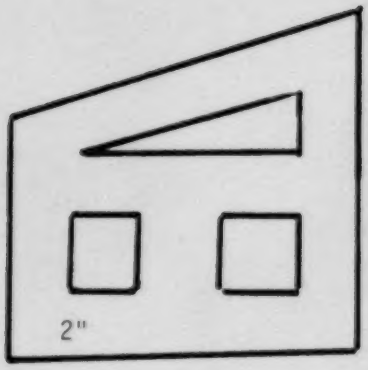
UNISTENCIL LETTERING
(Set I - Lettering - Card 39)

UNISTENCIL LETTERING
(Set I - Lettering - Card 39)

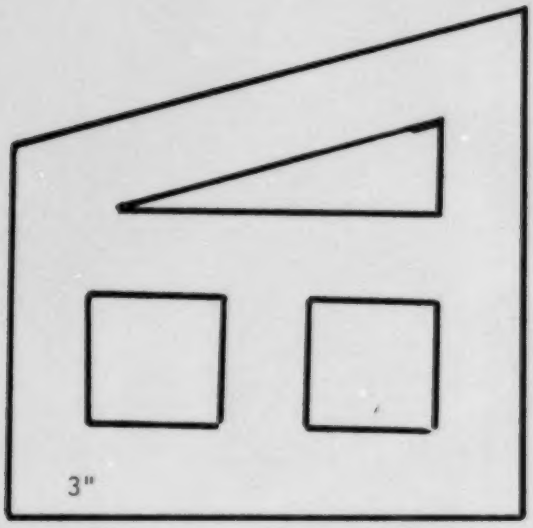
UNISTENCIL HANDOUT

(PATTERNS)

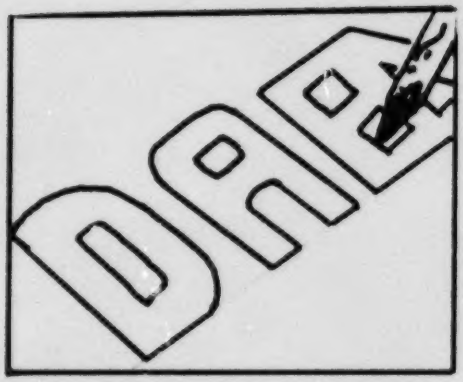
FOR (Set I - Lettering - Card 39)

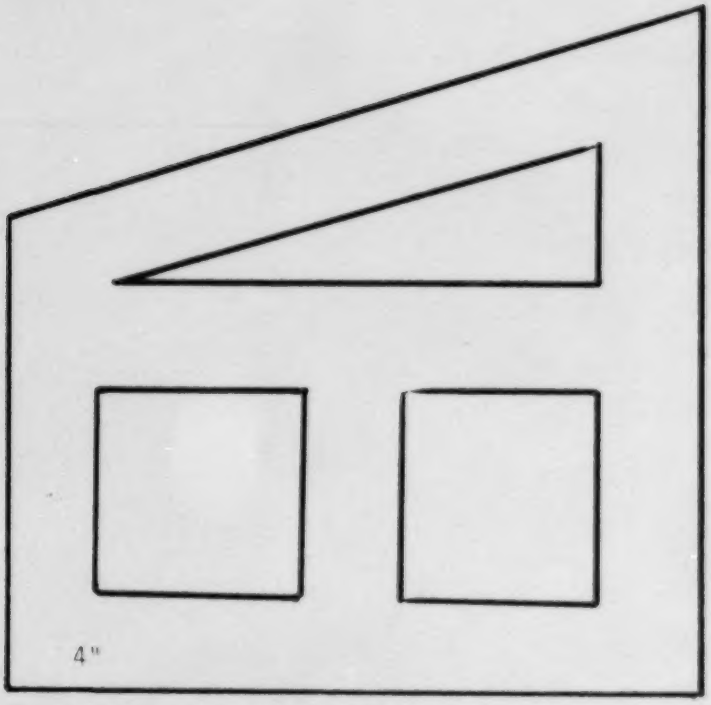


DO SOME LETTERING USING
THE CUTOUT PATTERNS



A B C
H J S
N





(also make a 5" and 7" pattern)

STEP-BY-STEP CARD FOR RUBBER STAMP LETTERING (Set I - Lettering - Card 40)

DEFINITION: Rubber stamp lettering consists of the process of using letters of molded rubber that are pressed into an ink pad and then they are used to transfer the ink onto a paper surface.

PERFORMANCE OBJECTIVE: Print two or more messages consisting of three to eight words each. Use at least two rubber stamp sizes, lettering techniques or kits.

STEP-BY-STEP PROCEDURES:

Read completely through these instructions carefully at least once before you start this project.

1. On a piece of scratch paper, write out your message and check the spelling.
2. Draw very light guide lines with a pencil on the paper on which you are going to print your message.
3. Work on a hard smooth surface.
4. As you ink the letters on the ink pad, check to make sure the complete surface of the letters are being inked.
5. Position the letter stamp within the pencil guidelines. Press the stamp down on the printing surface with a firm "rocking" motion, this will help ensure a complete letter impression.
6. Be careful not to smear or smudge the letters.
7. Clean the rubber stamps after using them and clean and straighten the kit. Make sure all letters are present; one lost letter ruins the whole set.

HELPFUL HINTS:

1. Dark ink on a light colored cardboard makes the most readable signs. Contrast is always important.
2. Keep the printing materials clean. Soap and water is the only cleaning material that should be used on the rubber stamps. Other materials can damage the letters.
3. Use only special rubber stamp ink when the pads need to be re-inked.
4. Rubber stamp lettering is an inexpensive method for printing labels or titles for charts, graphs, posters, and they are especially useful for short signs and name plates.

MATERIALS NEEDED:

Rubber stamps
Foot ruler, pencil
Inked stamp pad
Cleaning cloth, soap, water

EVALUATION PROCEDURE:

The letters should be easily read, the ink evenly distributed on the stamp and the edges of the letters clearly defined.

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RUBBER STAMP LETTERING
(Set I - Lettering - Card 40)

RUBBER STAMP LETTERING
(Set I - Lettering - Card 40)

STEP-BY-STEP CARD FOR SPEEDBALL LETTERING (GOTHIC)(Set I - Lettering - Card 41)

DEFINITION: Speedball Gothic lettering is a special style of hand lettering utilizing a penholder and special speedball penpoints (usually style "A" square tips or style "B" round tips). Speedball is a particular brand name.

PERFORMANCE OBJECTIVE: Produce professional looking Gothic styled lettering. Letter an 8 to 10 word sign.

STEP-BY-STEP PROCEDURES:

Read completely through these instructions carefully at least once before you start this project.

1. Choose the variation of Gothic lettering which suits your project. Choose the penpoint style and width which produces the desired style and place it in a penholder.
2. Sit comfortably close to a desk.
3. Draw guidelines and lightly sketch the letters on the poster in pencil.
4. Keep your poster flat on the desk and hold the poster in place with your free hand. Check the directional arrows for the pattern of strokes in the Speedball lettering book.
5. Dip the pen to fill the reservoir. Slide along neck of the bottle to remove excess ink.
6. Make a few strokes on a scrap paper before beginning a letter to avoid bloches.
7. Draw the letters with even pressure and uniform strokes.
8. Spend at least twenty minutes in practicing this style of lettering before starting your project.
9. Erase the guidelines.
10. Clean pen and points with water and wipe dry with tissue.

HELPFUL HINTS:

1. Practice each letter before attempting final project.
2. Stir the ink. It may have settled.
3. For posters lettering can be done on separate paper and then rubber-cemented to the poster card.
4. Proper spacing and misspelling is avoided by pre-sketching each word with a soft pencil.
5. Be certain that working area is clean.
6. Blot excess ink before applying to paper.
7. Laminating the finished sign will prevent smudges and smearing of ink.

MATERIALS NEEDED:

Smooth surfaced paper or postercard for practice and finished product.
Use a drawing penholder and Speedball pen points "A" or "B" which both produce uniform width Gothic style lettering lines.
Free-flowing black ink (India) or free-flowing sho-card colors.
Pencil, ruler, and art gum eraser.
Booklet or sheet showing the Gothic style alphabet.

EVALUATION PROCEDURE:

Lettering should be neat, readable, and well spaced with no blotting and no spelling mistakes.

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SPEEDBALL LETTERING (GOTHIC)
(Set I - Lettering - Card 41)

SPEEDBALL LETTERING (GOTHIC)
(Set I - Lettering - Card 41)

STEP-BY-STEP CARD FOR SPEEDBALL LETTERING (ROMAN) (Set I - Lettering - Card 42)

DEFINITION: Roman lettering is a special style of hand lettering utilizing a penholder and special penpoints. (Usually style "C" or "D" Speedball pen points).

PERFORMANCE OBJECTIVE: Produce professional looking Roman styled lettering. Letter an 8 to 10 word sign.

STEP-BY-STEP PROCEDURES:

Read completely through these instructions carefully at least once before you start this project.

1. Choose the variation of Roman style lettering which suits your project. Choose the pen point style and width. which produces the desired style, and place it in a penholder.
2. Sit comfortably close to a desk.
3. Draw guide lines and lightly sketch the letters on the poster in pencil.
4. Keep your poster flat on the desk and hold the poster in place with your free hand. Check the directional arrows for the pattern of strokes in the Speedball Lettering Book.
5. Dip the pen to fill the reservoir. Slide along neck of the bottle to remove excess ink.
6. Make a few strokes on a scrap paper before beginning a letter to avoid blotches.
7. Draw the letters with even pressure and uniform strokes.
8. Spend at least one-half hour in practicing this style of lettering before starting your project.
9. Erase the guide lines.
10. Clean pen and points with water and wipe dry with tissue.

HELPFUL HINTS:

1. Practice each letter before attempting final project.
2. Stir the ink; it may have settled.
3. For posters, lettering can be done on separate paper and then rubber-cemented to the posterboard.
4. Proper spacing and misspelling is avoided by pre-sketching each word with a soft pencil.
5. Be certain that working area is clean.
6. Blot excess ink before applying to paper.
7. Laminating the finished sign will prevent smudges and smearing of ink.

MATERIALS NEEDED:

Smooth surfaced paper or poster card for practice and finished product.
Use a drawing penholder and Speedball pen points "C" and/or "D"; both produce the characteristic thick and thin elements of Roman lettering.
Free-flowing black ink (India) or free-flowing sho-card colors.
Pencil, ruler and art gum eraser.
Booklet or sheet showing a Roman style alphabet.

EVALUATION PROCEDURE:

Lettering should be neat, readable, and well spaced with no blotting and no spelling mistakes.

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SPEEDBALL LETTERING (ROMAN)
(Set I - Lettering - Card 42)

SPEEDBALL LETTERING (ROMAN)
(Set I - Lettering - Card 42)

STEP-BY-STEP CARD FOR SPEEDBALL LETTERING (OLD ENGLISH) (Set I - Lettering - Card 43)

DEFINITION: Old English lettering is a special style of hand lettering utilizing a penholder and special pen points. (Usually style "C" with oblong tips or Style "D".)

PERFORMANCE OBJECTIVE: Learn to form Old English style lettering which can be used on posters or signs for special effects. Letter a 6 to 10 word sign.

STEP-BY-STEP PROCEDURE:

Read completely through these instructions carefully at least once before you start this project.

1. Choose the variation of Old English lettering which suits your project. Choose the pen width which produces the desired style.
2. Sit comfortably close to a desk.
3. Draw guide lines. Lightly sketch the letters on the poster.
4. Hold the poster or paper in place with your left hand. (If right handed.)
5. Study the shape of the letters. Check the directional arrows for the pattern of strokes in the Speed Ball lettering book.
6. Dip the pen to fill the ink reservoir. Slide along the neck of the bottle to remove excess ink. Make a few strokes on a scrap paper before beginning a letter to avoid blotches.
7. Draw the letters with even pressured strokes.
8. Spend at least one hour in practicing this style of lettering before starting your project.
9. Erase guide lines.
10. Clean pen with water. Wipe dry.

HELPFUL HINTS:

1. Practice each letter before attempting final project.
2. Stir the ink; it may be settled.
3. For posters, lettering can be done on separate paper and then rubber-cemented to the poster card.
4. Proper spacing and misspelling is avoided by lightly sketching each word with a soft pencil.
5. Be certain working area is clean.
6. Blot excess ink before applying to paper.
7. Laminating the sign will prevent smudges and smearing of ink.
8. Old English lettering is an interesting style, however, it is not recommended for use with little people who are just learning to read.

MATERIALS NEEDED:

Smooth surfaced paper or poster card for practice and finished product.
Drawing penholder and Speedball nibs "C" and/or "D".
Free-flowing black ink (India) or show-card colors.
Pencil, ruler and art gum eraser.
Booklet or lettering sheet showing the Old English text style of lettering.

EVALUATION PROCEDURE:

Lettering should be neat, readable, and well spaced with no blotting and no spelling mistakes.

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SPEEDBALL LETTERING (OLD ENGLISH)
(Set I - Lettering - Card 43)

SPEEDBALL LETTERING (OLD ENGLISH)
(Set I - Lettering - Card 43)

STEP-BY-STEP CARD FOR LETTERING WITH THE WRICO SIGN-MAKER SYSTEM
(Set I - Lettering - Card 44)

DEFINITION: The Wrico Lettering System is a stencil-tracing lettering technique that consists of brush pens, green plastic lettering guides and metal guide holders (of various sizes).

PERFORMANCE OBJECTIVE: Make a sign or poster consisting of eight words or more using the WRICO Lettering method.

STEP-BY-STEP PROCEDURES:

Read completely through these instructions carefully at least once before you start this project.

1. Look at the green transparent plastic lettering guides and select the letter height you desire to use. (Letters range from 3/8" to 4" in height.) There are also several styles of letters.
2. Select the brush pen size that you need to use with the lettering guide you selected (on the green lettering guide you can read the pen size that is needed).
3. Select the appropriate size metal guide holder. The metal guide holder is placed on the table where you will be working. The rubber strips on the bottom keeps the guide holder from slipping.
4. Place the green lettering guide in the channel of the metal guide holder so that green guide can slide smoothly to the right or left. The green lettering guide should not touch the surface to be lettered. This prevents smudging of the inked letters.
5. Place practice paper or cardboard in position under green lettering guide and guide holder.
6. Fill the pen with ink by pressing the plunger down so that the brush portion of the pen is exposed. This exposed brush part of the pen is the only portion that is ever dipped into the ink. Release the plunger slowly and the metal brush, coated with ink, moves back up into the point of the pen. The pen is now filled with enough ink to make two or three letters before re-filling.
7. Before you start writing with the pen, make the following VERY IMPORTANT adjustments:
   ...Twist the adjustment nut on the plunger end of the pen so that the end of the brush is even with the pen tip.
   (If the brush is out too far, turn the adjustment nut to the left.)
   (If the brush is not out far enough, turn the adjustment nut to the right.)
   ...Now twist the adjustment nut a little to the left so that the brush is recessed slightly. This will help the ink to flow more easily off the point of the brush so that you can have well-inked solid lines.
8. Slide the green lettering guide so that the first desired letter is in position over the writing surface. Place the pen in the letter guide. The brush pen should always be used in a vertical position and perpendicular to the lettering surface. Slide the pen through the letter form with light even pressure on the pen point against the lettering surface.
9. Most letters are made with the pen while within one single opening; however, in order to complete some letters two openings are required; for example B, M, W, and with some templates even A, D, P, R, etc. (For example, the letter B is first made using the vertical stroke from the D or E letter guide and then the curved part of the B is slid into position and traced in order to finish the B.)

10. Practice lettering for at least one-half hour to an hour prior to attempting the assignment that you will turn in for evaluation.
11. Letter a sign or a poster that has eight words or more.
12. Spacing of letters is done optically (looking at the letters) rather than using any mechanical measuring technique.
13. When you have finished lettering, take the pen apart and clean it with water, wipe dry with tissue and re-assemble.

HELPFUL HINTS:

1. Be certain that the brush is clean before you start. (Clean in water and wipe with tissue to remove old ink.)
2. A smooth, clean, lettering working surface is best for paper or cardboard.
3. Practice-Practice! Especially letters like the B, M, W, R, and K. Connect all lines of these letters. Write the word MARK several times.
4. When moving the green lettering guide, do not smear wet letters.
5. Fill the pen after writing two or three letters.
6. Remember, hold the pen perpendicular to writing surface.
7. When writing with the pen, do not go straight down or straight up from the surface (like a helicopter landing or taking off) because this leaves blobs of ink and spoils your letters. Instead, move the pen to the writing surface in a gentle, gradual swinging landing movement (like an airplane lands and takes off). This process will help to prevent ink blobs in your lettering.
8. Very important! Read Step-By-Step Procedure number 7 again (penpoint adjustment).
9. Check your spelling.
10. Keep your hands clean and free from ink.
11. Minor mistakes in letters can sometimes be removed by scratching the dried ink with a razor blade.
12. The finished sign can be laminated with clear or wrinkled Seal-Lamin or clear or frosted contact plastic film in order to protect it from dust and stains.
13. Lettering size is important when viewing from a distance:
    1/4" letters for 8 feet
    1/2" letters for 16 feet
    1" letters for 32 feet
    2" letters for 64 feet

MATERIALS NEEDED:

Metal WRICO brush pen
Green plastic lettering guide
Metal guide holder
India ink (black)
Lettering cardboard or paper

EVALUATION PROCEDURES:

Your finished sign should be neat and clean with sharp well-inked letters that are made and closed correctly, not smeared or smudged, and have proper spacing. A poorly made sign will not be accepted. The pen must also be left clean.

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WRICO LETTERING
(Set I - Lettering - Card 44)

WRICO LETTERING
(Set I - Lettering - Card 44)

STEP-BY-STEP SELF-HELP CARD FOR HAND-DRAWN TRANSPARENCY (Set I - Transparencies - Card 45)

DEFINITION: A hand-drawn transparency is a visual message that is drawn directly onto acetate or plastic for use on the overhead projector.

PERFORMANCE OBJECTIVE: Make a hand-drawn transparency on clear (8 1/2"x11") acetate.

STEP-BY-STEP PROCEDURE:

Read completely through these instructions carefully at least once before you start this project.

1. On a piece of typing paper draw a sketch of the message you desire to transfer to the transparent film. Remember that the diagram must fit within the standard transparency cardboard frame with some space around all edges.
2. Now place the acetate film over the sketch and tape in place at the corners.
3. Use a black grease pencil or felt marker to mark lines and words and to outline the areas that you wish to color.
4. Use felt pens, colored felt markers or colored pencils or inks to apply color. (Be sure these items are designed for transparencies, otherwise they may all project just black no matter what color they are.) (Test the colors to see how they project.)
5. Mount the transparency to a standard size transparency cardboard frame with masking tape. (When you mount transparencies, tape two adjacent sides first (not opposite sides), then stretch the transparency tight to remove any wrinkles and tape down the other two adjacent sides.)

HELPFUL HINTS:

1. India ink will not usually hold well to most types of clear acetate or clear plastic. Sometimes a drop or two of liquid detergent stirred into the ink helps it to adhere. Sometimes wiping the surface of the acetate or plastic with rubbing alcohol might also help the ink to adhere.
2. India ink will usually adhere quite well to cleared film or cleared X-ray film because these acetates are coated with a receptive emulsion. Two types of acetate that are especially designed for hand drawing with inks are "coated acetate" which has a special prepared surface and "frosted acetate" that has an etched surface.
3. In most cases, the best writing materials to use on inexpensive clear acetate or plastic for words, lines, and drawings are: Wax-base marking pencils ("grease" pencils), or felt pens. Some of these project only black but others are especially designed so that they project their own transparent color.
4. It is possible to purchase acetate or clear plastic in individual transparency-sized sheets or in large pieces that can be cut to desired size.
5. Most markings from felt pens and grease pencils can be removed from the transparency with a cloth dampened with water. However, there are permanent-type inks, and felt pen markers that can only be removed by using a special cleaner or solvent (for example: lighter fluid or rubber cement thinner may be used).
6. Some grease pencils and felt markers may be smeared during use on hand-made transparencies, therefore, it is suggested that another sheet of clear acetate or plastic can be placed over the drawing and also attached to the cardboard frame.
7. Use the hand-made transparency technique to test out ideas you develop and then if they prove successful, you may want to redo them utilizing one of the more permanent and professional looking methods.

STEP-BY-STEP CARD FOR MAKING A HAND-MADE MASTER FOR A THERMOFAX TRANSPARENCY
(Set I - Transparencies - Card 46)

DEFINITION: A master for the thermofax machine can be made by hand-drawing or typing a message onto a piece of typing paper. This master can then be used to make a transparency.

PERFORMANCE OBJECTIVE: Make a hand-drawn or typed master and then use it to make a thermofax transparency.

STEP-BY-STEP PROCEDURES:

Read completely through all these instructions carefully at least once before you start this project.

1. Draw, sketch, type or free-hand letter a message on a piece of typing paper. The message should be placed in the center area of the paper leaving at least a 1" border of empty space around all edges of the paper.
2. The message can be drawn on the paper with a soft No. 2 pencil or else with India ink. Most ball point pens or felt marking pens (even though they may be black) do not have enough carbon in the ink to make a good thermofax transparency.
3. Lettering on the master should be no smaller than 1/4" in height and it is best to use all capital letters. If you must use a typewriter, use the largest type available and use all capital letters.
4. Go over the drawing and the lettering at least twice with the pencil in order to place enough carbon on the master.
5. For this assignment use a medium-heavy thermo acetate that will produce a black line when exposed to heat in the thermofax machine.
6. Place this acetate over your hand-drawn master so that the notch in the acetate is in the upper right-hand corner.
7. Adjust the setting on the thermofax machine so it correlates with the type of acetate you are using.
8. After the transparency is made, it can be mounted in a frame with masking tape.
9. Color may be added to the transparency by using special transparency crayons, inks, pencils, felt pen markers, or color adhesive sheets.

HELPFUL HINTS:

1. It is possible to make a transparency from a purple ditto or a drawing made with colored pencils, felt markers, or even blue or red pens IF you make a Xerox copy of any of these items and then use the Xerox copy as the thermofax master.
2. Sometimes it is necessary to put the acetate and master through the machine two or three times so it may be wise to tape the master to the acetate with two small pieces of masking tape in order to keep the acetate from slipping.
3. Do not waste the thermal acetate. It is rather expensive.
4. When mounting a transparency in a frame (almost any kind of transparency), first tape two joining adjacent sides, then stretch out any wrinkles by pulling gently on the loose corner, then tape down the remaining two sides. If you tape down two opposite sides first, you tend to cause wrinkles to form in the mounted transparency.

MATERIALS NEEDED:

Typing paper
No. 2 pencil or India ink
Transparency frame
Masking tape
Thermofax machine
Thermofax black line acetate

STEP-BY-STEP CARD FOR MAKING A PLASTIC WRAP TRANSPARENCY (Set I - Transparencies - Card 47)

DEFINITION: A handmade plastic wrap transparency is a simple inexpensive, and effective transparency technique for use on the overhead projector.

PERFORMANCE OBJECTIVE: Use the thermofax machine and make a transparency from a handdrawn master onto a sheet of plastic wrap, then mount it for use on the overhead projector.

STEP-BY-STEP PROCEDURE:

Read completely through all these instructions carefully, at least once before you start this project.

1. Draw, sketch, type, or free-hand letter a message on a piece of standard size typing paper. The message should be placed in the center area of the paper leaving at least 1 1/2" empty space around all edges of the paper.
2. The message can be drawn on the paper with a soft "No.1" or "No.2" pencil or else with india ink. These items have high carbon content.
3. Lettering on the master should be no smaller than 1/4" in height and it is best to use all capital letters. If you must use a typewriter, use the largest type available and use all capital letters.
4. Cut a piece of plastic wrap the size of the typing page master you have made. Place it over the master.
5. Place the master and the thin plastic wrap into a thermofax carrier. This will securely hold these items as they are placed into the thermofax machine and moved through the exposing heat and light. (A medium setting on the machine will work best for this process.)
6. The heat and light etches the writing on the master into the plastic wrap. The result is a white etched pattern on the plastic that will look like black lines when projected.
7. Mount this thin plastic wrap transparency into a standard size transparency frame with masking tape and it is ready for projection. Colored transarency felt markers can be used to add color to your projected visual.
8. A standard size clear sheet of acetate can be mounted under the light weight transparency for support if needed; however, this does increase the cost of each visual.

HELPFUL HINTS:

1. Try different brands of plastic wrap, also clear plastic bags and clear storm window plastics. The results will vary somewhat. By experimenting you will find materials that you will like better than others.
2. The carrier keeps the thin plastic wrap from becoming entangled in the thermofax machine and damaging the rollers.
3. A carrier for the thermofax machine can be made by clearing two pieces of x-ray film (8 1/2"x12") and then tape the two pieces together at one end only.
4. Plastic wrap and plastic bags can also be written on with transparency felt markers and mounted in frames and used as transparencies without using the thermofax machine.

MATERIALS NEEDED:

Plastic wrap or bags
Thermofax machine
Typing paper and soft pencil
Carrier for use in the thermofax
Transparency frames
Masking tape
Sheets of x-ray film (optional)

EVALUATION PROCEDURES:

The finished transparency should be readable and usable and mounted into a standard transparency frame.

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PLASTIC WRAP TRANSPARENCY
(Set I - Transparencies - Card 47)

PLASTIC WRAP TRANSPARENCY
(Set I - Transparencies - Card 47)

STEP-BY-STEP CARD FOR SEAL-LAMIN LIFT (Set I - Transparencies - Card 48)

DEFINITION: A Seal-Lamin Lift (or picture transfer) is made by laminating a clay-base picture with Seal-Lamin film using heat and pressure. The laminated picture is then soaked in water which removes all paper and leaves the picture inks impregnated into the laminating film. (Seal-Lamin is the trade name of the laminating film produced by SEAL Co.)

PERFORMANCE OBJECTIVE: Make a good Seal-Lamin lift (transparency) for use on the overhead projector.

STEP-BY-STEP PROCEDURES:

Read completely through these instructions carefully at least once before you start this project.

1. Select a clay-base picture from a magazine. Clay-base may be checked by moistening your finger and rubbing a small clear or white area on the page (but not a part of the picture area to be lifted). If moisture on the finger becomes milky-looking, the paper usually has a white clay base.
2. The hot press should be set at 225° for the new seal-lamin.
3. Trim the picture to desired size and then pre-dry it in order to remove any moisture. Lay the trimmed picture on a clean wrinkle-free piece of newsprint (the newsprint is porous enough to absorb moisture).
4. Cut a piece of seal-lamin an inch longer and wider than the picture to be laminated. Place the picture inside a cover sheet of seal-release paper. Now lay the seal-lamin dull side down over the picture. A little static electricity will hold it down in place onto the seal-release paper. Be certain that the seal-lamin does not extend out beyond the edges of the seal-release paper cover sheet.
5. Place in the hot press for 15 to 30 seconds. As soon as the picture is removed from the hot press, place it under a metal weight. This will speed cooling and promote adhesion.
6. If bubbles occur, use a clean tacking iron to apply heat and pressure to the area. (Work on a clean, hard, smooth surface.) The tacking iron should be turned to just above medium.
7. When seal-lamin has completely adhered to visual, remove from the seal-release paper and place the seal-lamin in warm water containing a few drops of liquid detergent. This promotes the soaking and loosening of the paper from the laminating film. Let it soak for about 20 minutes.
8. After the paper is soaked loose a white clay residue remains on the film, this must be washed off very gently using cotton or a very soft sponge. Wash the clay off while the film is under running water. This may take 2 or 3 tries inasmuch as the clay doesn't show up until the film is dry.
9. Only when all clay is removed, dry the lift, and then mount it in a transparency cardboard mounting frame. (See Helpful Hints.)
10. After the lift is mounted in frame, spray the dull side with two light coats of plastic spray. This must be done outside inasmuch as this spray is TOXIC to many people.

HELPFUL HINTS:

1. The standard size cardboard mount for the overhead projector is 10"x11 3/4" (outside dimensions). Sometimes the lift you make may be too small to fit within the ready-made commercial frame so it will be necessary for you to make your own. Be certain that the outside measurement of the cardboard you use is 10"x11 3/4" but you may cut the inside opening any size you need. (Keeping to a standard outside measurement facilitates storage.)

HELPFUL HINTS (Cont.)

2. When mounting a transparency into a frame, use masking tape and attach it to the frame at two adjoining sides, then lift the free corner, stretch out the wrinkles and attach the other two adjoining sides. This process should eliminate wrinkles in the mounted seal-lamin lift. (If you attach the masking tape to any two parallel sides first, you increase the chances for wrinkles in the finished mount.)
3. Whenever you use the plastic spray, be sure you use it outside. (Outside does not mean in the hall or some other room.)

MATERIALS NEEDED:

Seal-Lamin
Clay-base visual
Newsprint
Seal-release paper
Paper cutter
Hot press
Tacking iron
Transparency cardboard frame
Clear plastic spray
Masking tape

EVALUATION PROCEDURES:

Project the lift on the overhead projector. The transparency should look clean and clear and be free from any clay or paper fiber spots. All parts of the visual should be discernible. The lift should be mounted in a cardboard frame without wrinkles. The coating of clear plastic on the lift should be clear and even.

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SEAL-LAMIN LIFT
(Set I - Transparencies - Card 48)

SEAL-LAMIN LIFT
(Set I - Transparencies - Card 48)

3. Any kind of light source will work (floor lamps, photofloods, reflector lights, an extention cord with light bulbs). One light source will work; however, two lights are better.
4. Large black line drawings work best for this project. (Like those in a coloring book.)
5. In order to make the reduced picture onto a transparency--place a piece of clear acetate on top of the typing paper and do the tracings directly onto the transparency acetate with a transparency felt marker.

MATERIALS NEEDED:

Medium large black line picture
Tacks or tape
Movable lights
Stands or chairs for the lights
Overhead projector on cart
White typing paper
Pencil
Clear acetate sheet (optional)
Transparency marking felt pen

EVALUATION PROCEDURES:

The finished drawing should be an accurate smaller reproduction of the large picture. The drawing should be neat and clean.

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PICTURE REDUCTION BY REVERSE PROJECTION
(Set I - Reduction - Card 60)

PICTURE REDUCTION BY REVERSE PROJECTION
(Set I - Reduction - Card 60)

CUT ... E TO PROPER CARD

STEP-BY-STEP CARD FOR CLEAR SELF-ADHESIVE PLASTIC FILM LIFT
(Set I - Transparencies - Card 49)

DEFINITION: A plastic film lift (or picture transfer) is made by using clear plastic film that contains a self adhesive. It is pressed down over a picture, then soaked in water and the picture inks are transferred or lifted on to the plastic film.

PERFORMANCE OBJECTIVE: Make a good clear plastic film lift (transparency) for use on the overhead projector.

STEP-BY-STEP PROCEDURE:

Read completely through these instructions carefully at least once before you start this project.

1. Select a clay-base picture from a magazine. Clay base may be checked by moistening finger and rubbing a small spot on the page. If moisture on the finger becomes milky-looking, the paper has a clay base.
2. Trim the picture to desired size removing all unwanted paper.
3. Cut clear plastic film (without removing backing) about 1" larger than the picture, on all sides.
4. Remove backing from the plastic film and put sticky side onto the face of the picture being sure it covers the entire area to be 'lifted'.
5. Cover picture side with protective paper and then rub the picture in order to burnish the picture to the clear contact film. To burnish, use back of spoon, comb, or a side of pen or pencil, or a burnishing stick. Rub across picture pressing the contact paper close to picture. Take long even strokes at right angles to one another. The purpose is to remove all air bubbles between the contact film and the picture. Air bubbles will show up as frosted spots.
6. Place this laminated picture in between a seal-release cover sheet and then into the hot press for 10 seconds. The heat will activate the adhesive. Let the lift set overnight before proceeding.
7. Soak the plastic film and picture in lukewarm water to which a small amount of detergent has been added. Soak 15-20 minutes.
8. Remove the paper after it is loose. The picture lift will have a white material on the back. Wash, very gently, using cotton or soft sponge, until all this white clay is washed off. If some clay is still on the lift, it will usually show up after drying and have an ashy appearance, as white spots or streaks. Wash again, as many times as is necessary to remove all white clay.
9. When all clay has been removed from the lift, let it dry. It should then be coated on the back with plastic spray in order to give more life and brightness to the visual when it is projected.
10. When transparency is completed, it should be mounted in a frame and projected for your evaluation.

MATERIALS NEEDED:

Visual (with clay base)
Spoon, comb, pen or pencil
Water, detergent
Container for water
Paper towels
Posterboard
Clear acetate
Masking tape (for mounting transparency)
Clear plastic film
Transparency mounting frame
Hot press
Seal-release paper
Popcycle stick (for burnishing)

STEP-BY-STEP CARD FOR RUBBER CEMENT LIFT (Set I - Transparencies - Card 50)

DEFINITION: A rubber cement lift (or picture transfer) is made by transferring the inks from a clay base picture onto hand frosted acetate that has been coated with rubber cement.

PERFORMANCE OBJECTIVE: Make a rubber cement lift, transferring the entire picture onto acetate so that the colored picture can be shown on the overhead projector.

STEP-BY-STEP PROCEDURES:

Read completely through all these instructions carefully, at least once before you start with this project.

1. Select a visual to be lifted. Pictures must be printed on claybase paper. The National Geographic contains clay-based pictures. There are also many other magazines that contain clay-based pictures.
2. Clay Test: lightly rub a moist finger over an unprinted white area. If a white chalky residue appears on the finger, this indicates the paper is clay base and acceptable.
3. Using fine sandpaper or steel wool, vertically scratch the entire surface of a piece of transparent acetate, then horizontally scratch the entire surface of the acetate. If acetate is not translucent, repeat scratching process. Test by looking through acetate at the clock or some other object, if you cannot see the object, the acetate is scratched sufficiently.
4. Remove all the dust from the acetate; cotton works well.
5. Place acetate and visual on a clean sheet of newsprint paper. Apply an even coat of specially thinned rubber cement that is mixed for lifts. (Rubber cement should be thinned and left to stand overnight to rid it of air bubbles before using.) The rubber cement is applied to the face of the visual and to the frosted side of the acetate. Apply the rubber cement vertically onto the acetate and horizontally onto the visual. Apply strokes evenly and avoid going over the same area more than once. Be sure to keep strokes going in one direction only.

(cont.)

6. When rubber cement is dry, attach the rubber cement side of acetate to the rubber cement face of the visual. Look through the acetate to accurately position it on the visual. Bow the acetate and make the first contact at the center of the picture, then work to the edge.
7. Turn the acetate over so the back of the visual is up and cover it with a clean protective sheet. Rub the entire surface both horizontally and vertically with the back of a comb or spoon. This usually requires about five to ten minutes of rubbing. When completed there should be no "frosted" areas remaining on the visual. Frosted areas or bubbles indicate that the acetate is not firmly adhered to the visual and more rubbing is necessary.
8. Soak in a container of warm water for about 10 minutes. A tablespoon of liquid soap or powdered soap will help speed up the soaking time. Thicker paper will require additional soaking time.
9. Gently peel paper from the acetate. If peeling is difficult, return the picture and the acetate to the water for additional soaking.
10. When all paper has soaked loose, return the transparency to the water and gently wash off the white clay residue with cotton. It is more effective to wash off the clay under running water. Blot transparency dry with paper towels, or wave in the air to dry it.

(cont.)

11. Project the visual when it is dry. Do not place a wet transparency on the overhead projector!
12. If white patches of clay show up when dry (and they usually do), go back to the sink and repeat step 10.
13. Spray only after all the clay is removed. Spray the dull side of the acetate with clear plastic spray. This makes the transparency more transparent and protects the transfer side.
14. Tape the lift to a transparency mount for use on the overhead projector. If lift is too small for a standard transparency frame, make your own frame from a piece of posterboard cardboard.

HELPFUL HINTS:

1. Do not spray lift with plastic until all the white clay is removed. This may take several tries back to the sink for washing, then drying, then projecting on the overhead and examination until it is ready for coating and mounting.
2. Pay special attention to: the condition of rubber cement, the frosting and cleaning of the acetate, and special care in removing clay from the lift.
3. The average is usually two or three tries before an acceptable lift is produced so don't get discouraged.
4. Remember all spraying is done out of doors on newspaper.
5. When using the plastic spray put on a thin coat. A thick coat of spray often cracks the picture transfer as it dries.
6. It is strongly suggested that you make a sealamin lift and a plastic film lift before you make this rubber cement lift.
7. A heavier acetate (thicker) works well for this project, if available.

MATERIALS NEEDED:

Clay-based visual (picture)
Clear acetate
Sandpaper or steel wool
Cotton
Rubber cement and thinner
Protective papers
Comb or spoon
Container of water
Liquid or powdered soap
Paper towels
Plastic spray
Transparency mount
Masking tape

EVALUATION:

Project your visual. The lift should project well with no bubbles, scratches or irregularities showing on screen. A poor rubber cement lift will not be accepted for this assignment.

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RUBBER CEMENT LIFT
(Set I - Transparencies - Card 50)

RUBBER CEMENT LIFT
(Set I - Transparencies - Card 50)

STEP-BY-STEP CARD FOR FOLDING EASEL (Set I - Display - Card 51)

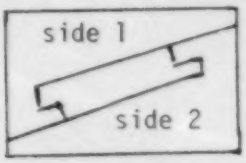
DEFINITION: A folding Tabletop Easel is a simple device that is constructed from heavy-ply chipboard (cardboard) and it is used for holding and displaying small mounted charts, posters and pictures.

PERFORMANCE OBJECTIVE: Construct a folding tabletop easel.

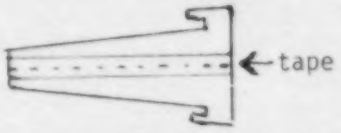
STEP-BY-STEP PROCEDURES:

Read completely through all these instructions carefully at least once before you start this project.

1. Using a large tabletop easel pattern, lay it on the 13"x19" piece of heavy 20-ply chipboard and trace the two halves of the easel so that both sides are exactly the same size. See diagram below:



2. If you do not have a pattern, it is not difficult to make one.
3. Using a papercutter, razorblade, or some other cutting tool, cut out the two sides of the easel. Always use a cuttingboard under your work so you do not cut or mar the tables.
4. You may want to use the large papercutter to cut the straight edges and then use the razorblade for cutting the notches.
5. When the two sides are cut out, lay them back-to-back on a flat surface. Butt the edges and tape them together with a 1" wide strip of cloth tape.



6. Next, fold easel closed and tape the back edge with a second piece of cloth tape 1" wide.

7. Finish adhering the tape to the back of the easel while the easel is folded shut.
8. Trim excess tape from the top and bottom edges of the easel when taping is finished.
9. Tabletop Easel is now ready for use...

HELPFUL HINTS:

1. When using razorblades, do not try to cut through the heavy cardboard in one or two strokes but rather take ten to twenty easy strokes and the job will be easier.
2. Always use cloth tape; it does not stretch like plastic tape.
3. The easel can be painted or covered to make it more attractive. Some suggested coverings are: wall paper, foil, burlap, butcher paper, printed self-adhesive plastic film, or rug material.
4. Easels made from plywood or masonite are more durable and will hold heavier objects for display.

MATERIALS NEEDED:

Heavy cardboard 20-ply
Razorblade and cuttingboard
Cloth tape

EVALUATION PROCEDURE:

The easel should be able to open and close easily. It should stand with a flat steady base when open.

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FOLDING EASEL
(Set I - Display - Card 51)

FOLDING EASEL
(Set I - Display - Card 51)

STEP-BY-STEP CARD FOR MAKING A FOLDED PICTURE (Set I - Display - Card 52)

DEFINITION: A folded picture is a technique for mounting a large picture onto two cardboards that are hinged together in the center so that the two halves of the mounted picture can be folded together face-to-face in order to protect the pictures and facilitate storage.

PERFORMANCE OBJECTIVE: Make a folded picture mount with hidden hinges.

STEP-BY-STEP PROCEDURE:

Read completely through all these instructions carefully at least once before you start this project.

1. Select a large picture that will fit on two 11"x14" cardboards. The large folded picture can consist of two parts of a chart or a poster, a two-page picture, a centerfold, two related calendar pictures, or two related pictures from any series, or one side can be a picture and the second side a related written description or a map or a narrative that correlates with the picture.
2. Trim the pictures and mount (using MT-5) the two parts on the two separate cardboards. If one single picture is to be partitioned so that it will fit on the two cardboards, then butt the center edges as close as possible to the center hinge.
3. When the pictures are mounted to the cardboards, place a durable hinge on only the back of the cardboards.
4. After the hinge has been attached to the back, then rubber cement a second cardboard to the back of each side of the folded picture and this process will hide the hinge.
3. A folded picture can be a tri-fold if you desire.

MATERIALS NEEDED:

Pictures for mounting
Cardboards for mounting
Hinge material
Cutting tools
Dry mount tissue
Rubber cement

EVALUATION PROCEDURES:

There should be no mounting tissue showing around mounted pictures. The picture should fold shut evenly. The hinge should be hidden on the back.

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FOLDED PICTURE
(Set I - Display - Card 52)

FOLDED PICTURE
(Set I - Display - Card 52)

HELPFUL HINTS:

1. The finished mount can be displayed on an easel, or it can stand by itself on a table.
2. Check your hinge sample page and select one of the eight or more types of hinge materials that will fit your needs (cloth tape, Chartex, Seal-lamin, etc.)

(cont.)

.STEP-BY-STEP CARD FOR MAKING AN ACCORDION BOOK (Set I - Display - Card 53)

DEFINITION: An accordion book is a series of related pictures that are each mounted on separate but identical sized cardboards and then these mounted pictures are hinged together horizontally or vertically so that the series will fold together compactly.

PERFORMANCE OBJECTIVE: Make an accordion book containing 6, 8, 10 or 12 pages.

STEP-BY-STEP PROCEDURE:

Read completely through these instructions carefully at least once before you start this project.

1. Select pictures for the accordion book. Preferably, they should be the same size and related in some way.
2. Cut an even number of cardboards (6-8-10-12) a little larger than the pictures to be mounted.
3. Mount the pictures to the cardboards using mounting tissue, rubber cement or plastic bags.
4. Arrange the mounted pictures in the order in which you desire to have them in the accordion book.
5. Anchor the mounts together with hinging material using the same method that was used in making the folding tabletop easel. Fold each pair of pages together face-to-face and apply the tape to the back of the fold. Next, turn pages all face down and arrange in order. Butt them together and tape all the rest of the cards. Trim away any excess hinge material. Mounts should all be joined so that they will fold together in a neat, even stack.

HELPFUL HINTS:

1. Most accordion books are hinged so that they can be displayed on a table and spread out horizontally. However, they can be hinged vertically so that they can be hung on the wall and the pictures displayed in a long vertical strip.
2. Accordion books should always have an even number of pages even though one page may not contain a picture. When folded shut, all pictures should be covered and protected.
3. Calendar pictures are probably the best source of a series of pictures that are related and of uniform size. Sets of pictures can be purchased however.
4. When collecting calendar pictures, always try to obtain two sets. This saves time and cost in having to split pages when pictures are back-to-back.
5. There are many materials that can be used for hinges (clear, frosted, or printed contact plastic film, Seal-Lamin, Chartex, iron-on Pelon, iron-on mending tape or patching material, strapping tape, colored plastic tapes, or cloth bookbinding tape (do not use masking tape).
6. To make an accordion book with hidden hinges, place hinges only on the back of the mounts and then rubber cement another cardboard to the back of each mounted picture which will hide the hinge.
7. Twelve pictures should be the limit for one accordion book.

MATERIALS NEEDED:

Pictures
Mounting colored posterboard
Hinge materials
Mounting materials:
    dry mount tissue
    rubber cement
    plastic bags
Paper cutter or scissors
Hot press
Tacking iron

*STEP-BY-STEP CARD FOR MAKING A SILHOUETTE LESSON FOR THE OVERHEAD PROJECTOR
(Set I - Display - Card 54)

DEFINITION: There are many flat and three dimensional materials that can be projected as silhouettes on the overhead projector for teaching and instructional purposes.

PERFORMANCE OBJECTIVE: Make or organize an instructional lesson that can be used to teach some idea or concept by projecting real, flat or three dimensional objects as silhouettes on the overhead projector.

STEP-BY-STEP PROCEDURES:

Read completely through these instructions carefully at least once before you start this project.

1. Decide on some theme, topic, idea or concept that you can teach by placing some solid or opaque materials on the stage area of the overhead projector and then project these materials as solid silhouettes.
2. The items can be materials like cut-out silhouettes of maps or geometric shapes, or solid real items like a nail, paper clip, key, bolt, or dozens of other items that project a sharp discernible silhouette.
3. Be creative and organize a lesson in your subject area and for the grade level you plan to teach.
4. The items should all be small enough to lay on the 10"x10" stage of the overhead projector.
5. Organize your silhouettes into an envelope and write out a brief description of your lesson presentation stating Topic, Audience and Purpose.

HELPFUL HINTS:

1. Many silhouette lesson materials can be cut out of cardboard.
2. The following are some suggested lesson topics:
   A science lesson using a magnet and iron filings.
   A shorthand lesson using pipe cleaners bent into symbols.
   A math lesson with cut-out fractions.
   A geography lesson using a cut-up map of the U.S.A. into states.
   An Industrial Arts lesson teaching shape and size of nails, bolts, screws, etc.
   A spelling lesson built around small items from:
   ....the teacher's desk drawer (tacks, clips, rubber bands, etc.)
   ....Mother's sewing basket (pins, needle, thread, bobbins, etc.)
   ....Dad's tool box (nails, bolts, screws, pliers, screwdrivers, etc.)
   ....Etc., etc., etc.
   A trip to the zoo or the farm using many little ceramic, rubber or plastic animals.
   A spelling test using a set of cut-out letters.
3. There are dozens of small items in Barbie doll kits, games, prizes in Cracker Jack, little plastic bugs, etc., that can all be organized into some teaching lesson and used as silhouettes.

MATERIALS NEEDED:

Overhead projector
Silhouette lesson materials
Envelope and paper

EVALUATION PROCEDURE:

Your silhouette lesson should pertain to the subject area and for the grade level in which you plan to teach. Your lesson should be creative and interesting and all silhouettes used should be easily discernible.

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SILHOUETTE LESSON
(Set I - Display - Card 54)

SILHOUETTE LESSON
(Set I - Display - Card 54)

STEP-BY-STEP CARD FOR MAKING A DISPLAY BOARD AND A PRESENTATION FOR THE BOARD
(Set I - Display - Card 55)

DEFINITION: There are many types of display boards, for example: pin-tack, felt, magnetic, chalkboard, electric, slot board, hook and loop, etc. All these and more can be used for presenting information for instructional purposes.

PERFORMANCE OBJECTIVE: Make some type of display board and a presentation for the board.

STEP-BY-STEP PROCEDURES:

Read completely through these instructions carefully at least once before you start this project.

1. Read the booklet "Display and Presentation Boards," (it discusses and illustrates 24 different types of display boards). Decide which display board you will make.
2. Design and make your display board and then make a presentation for that board.
3. The board and the presentation should relate to your own teaching area and needs.
4. The presentation you make for your display board should demonstrate your skills in mounting, laminating, lettering, enlarging, etc.

HELPFUL HINTS:

1. The type of display board you make is often determined by the type of material or presentation you plan to use on it.
2. The display board can be so designed that you may use it for more than just one purpose. (For example: a magnetic-chalkboard or a pin-tack-felt board, etc.)

MATERIALS NEEDED:

Display and Presentation Booklet
Materials to make board
Materials to make presentation
Hand tools

EVALUATION PROCEDURES:

The display board and the presentation for the board should be well made and organized. They should relate to your teaching area and grade level so that this project will give you years of service.

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DISPLAY BOARD AND PRESENTATION
(Set I - Display - Card 55)

DISPLAY BOARD AND PRESENTATION
(Set I - Display - Card 55)

EVALUATION PROCEDURE:

The enlargement or reduction should be accurate reproductions of the original except for size. The grid guidelines should be erased from around the finished picture.

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GRID ENLARGING AND REDUCING
(Set I - Enlarging/Reducing - Card 58)

GRID ENLARGING AND REDUCING
(Set I - Enlarging/Reducing - Card 58)

CUT... MOVE TO PROPER CARD

STEP-BY-STEP CARD FOR ENLARGING WITH THE OPAQUE PROJECTOR (Set I - Enlarging - Card 56)

DEFINITION: An Opaque Projector is a device that will project most all opaque materials if they are flat enough to be inserted into the 11"x11" stage area.

PERFORMANCE OBJECTIVE: Insert a picture in the opaque projector, focus onto a piece of paper or cardboard and make a tracing of the projected enlargement.

STEP-BY-STEP PROCEDURES:

Read completely through these instructions carefully at least once before you start this project.

1. Select a picture, map or a line drawing that will be useful to you when enlarged.
2. Open the stage area located at the rear, underside of the projector. Insert picture and re-close.
3. Mount a large piece of posterboard or a sheet of paper to the wall in front of the projector.
4. Turn on the projector lamp and focus the projector with focusing knob and if need be, by moving the cart with the projector until the projected image is clear, sharp and the size you desire.
5. Trace the projected enlargement using a pencil. When finished, remove enlargement from the wall and darken the lines with a felt marker and add color if you desire.

HELPFUL HINTS:

1. Real objects, if they are flat enough, can also be placed onto the stage projecting area in the opaque projector. Their projected image can then be enlarged.
2. Large drawings, wall murals, or even composite pictures can be made by using the opaque projector.
3. The picture could be projected onto the chalkboard or even a window where the enlargement could be drawn.
4. Colored chalks, crayons, watercolor, felt markers or other coloring materials can be used.
5. When using felt markers, be aware that they can go through thin paper and stain the table or the wall so use newspaper under your drawing when using felt markers.

MATERIALS NEEDED:

Opaque projector on movable projection cart
Pencil
Coloring materials
Picture to enlarge
Large paper or cardboard
Thumbtacks or masking tape

EVALUATION PROCEDURES:

The enlargement should be accurate, clean and neatly done with sharp clear lines. It should be an enlargement that is useful to you.
Bring the picture from which the enlargement was made with you when your enlargement is evaluated.

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OPAQUE PROJECTION ENLARGEMENT
(SET I - Enlarging - Card 56)

OPAQUE PROJECTION ENLARGEMENT
(Set I - Enlarging - Card 56)

STEP-BY-STEP CARD FOR MAKING A TRANSPARENCY ENLARGEMENT (Set I - Enlarging - Card 57)

DEFINITION: A Transparency Enlargement can be made by projecting and focusing any size of transparency onto posterboard or paper and then make a tracing of the projected enlargement.

PERFORMANCE OBJECTIVE: For this project, place a transparency on the stage of an overhead projector, focus onto paper or posterboard and trace an enlargement of the transparency.

STEP-BY-STEP PROCEDURES:

Read completely through these instructions carefully at least once before you start this project

1. Make or select a transparency that will be useful to you when enlarged.
2. Place the transparency on the stage of the overhead projector.
3. Mount a large piece of posterboard or a sheet of paper to the wall in front of the projector.
4. Turn the machine on and focus the transparency onto the paper by adjusting the focusing knob or by moving the projector forward or backward until you have the size of the enlargement you desire.
5. Trace the projected enlargement using a pencil. When finished remove enlargement from the wall and darken the lines with a felt marker and add color if you desire.

HELPFUL HINTS:

1. The transparency for the overhead can be made by any technique.
2. A transparency enlargement can also be made by using a 35 mm slide projector, a filmstrip projector, a 3 1/4"x4" lantern slide projector or even a photographic enlarger.
3. Many small flat or three dimensional items can also be placed on the stage area of the overhead and projected as silhouettes for enlargement.
4. When using the overhead projector never move it more than a few feet while the bulb is on because the filament in the bulb can be jarred loose.

MATERIALS NEEDED:

Transparency
Overhead projector
Copy paper
Pencil and coloring materials

EVALUATION PROCEDURES:

The enlargement should be accurate, clean and neatly done with sharp, clean lines. It should be an enlargement that is useful to you. Bring the transparency from which the enlargement was made with you when your enlargement is evaluated.

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TRANSPARENCY ENLARGEMENT
(Set I - Enlarging - Card 57)

TRANSPARENCY ENLARGEMENT
(Set I - Enlarging - Card 57)

STEP-BY-STEP CARD FOR GRID ENLARGING AND GRID REDUCING (Set I - Enlarging/Reducing - Card 58)

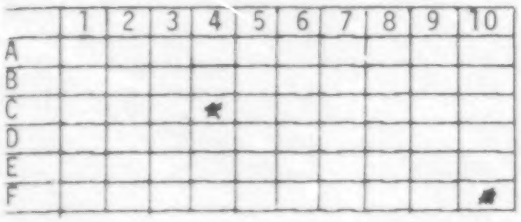
DEFINITION: The Grid technique is a process of enlarging and reducing visuals by using vertical and horizontal lines in squared patterns.

PERFORMANCE OBJECTIVE: Two tasks are involved: (1) make an enlargement and (2) reduce a visual by using the grid technique.

STEP-BY-STEP PROCEDURES:

Read completely through all these instructions carefully at least once before you begin.

1. Select a picture, sketch, etc. about 8x10 in size. (Can be any size, however,)
2. There are two processes you can now use. First method, draw 1/2" or 1" grids over the entire picture (vertically and horizontally), or second method, draw these grid lines on a piece of 8"x10" acetate and lay it over the picture.
3. You now have the entire picture covered with grids.
4. The grids can be numbered across the top and alphabetized along one side so with this technique each square can have its own identification label. (For example, see diagram and find c-4, 10-f, etc.)



5. For the enlargement draw larger grids very lightly upon the surface of the paper or cardboard you are going to draw on. These grids should be at least twice as large as those you used on the original (or even larger).
6. Using the squares as visual guidelines, copy your original picture into the enlarged grid. Just one or two squares at a time. Use a pencil.
7. When enlargement is complete, go over lines with a felt marker and color if desired. Erase all grid lines.
8. For reducing a visual using the grid technique, the same process can be followed only in reverse.
9. For grid reduction you draw a smaller grid pattern than the grid that is over the original picture.

HELPFUL HINTS:

1. The enlargement or reduction can be used as a part of a chart or poster or bulletin board display.
2. When you draw grids, make the lines as light as possible so that they will be easier to erase on the finished enlargement.
3. Do the enlargement first before you try the reduction.
4. A grid pattern transparency can be made on the thermofax for use in enlarging and reducing pictures on the chalkboard.
5. You can reproduce a visual the same size as the original by simply keeping the grid squares the same size.
6. Remember any "square" can draw.
7. Grid distortion drawings can also be made by making all the vertical or or horizontal grid lines longer, thus proportion and shape can be changed.

MATERIALS NEEDED:

Yardstick
Visual(s)
Posterboard
Scissors
Pencil or pen
Felt marker
Pre-made grid patterns
(paper or acetate)

STEP-BY-STEP CARD FOR USING THE PANTOGRAPH (Set I - Enlarging/Reducing - Card 59)

DEFINITION: A Pantograph is an instrument that is used to copy illustrations. It can change their original size by either making them larger or smaller(or the same size).

PERFORMANCE OBJECTIVE; Select an illustration, then using the Pantograph, make an accurate enlargement and a reduction of the original.

STEP-BY-STEP PROCEDURES:

Read completely through these instructions carefully at least once before you start this project.

1. Select an illustration that can be useful to you in your teaching. (An illustration usually refers to a line drawing rather than a photograph.) A rather large, smooth working surface is needed.
2. Fasten the clamp of the Pantograph to the lower left-hand corner of the drawing surface.
3. For enlarging, place the illustration under the tracer point in the middle of the Pantograph and the drawing paper under the pencil point in the outer bar to the right.
4. Both the original illustration and the copy sheet should be fastened down to the drawing surface. (Use small pieces of masking tape.)
5. In order to copy, hold the tracer point with one hand and follow the lines of the original illustration. With your other hand, hold the pencil to the copy sheet. Lift the pencil when needed in order to omit any undesired lines.
6. For reducing, reverse the positions of the pencil point and the tracer point and also the location of the original illustration and the copy sheet.
7. Follow the printed directions and the marks on the Pantograph in order to change the ratios for enlarging or reducing.
8. The finished enlargement and reduction can be colored and mounted or they can be used as part of a chart, poster or bulletin board presentation.

HELPFUL HINTS:

1. Before securing all items into place it is advisable to determine roughly the circumference, the size, and the general location of where the copied drawing will be in order to have some idea as to where to position the copy paper.
2. When enlarging, the larger your visual is, the further to the right will be the pencil point. When reducing, the smaller your visual is, the further to the left will be the pencil point.
3. The Pantograph is adjustable to 21 different ratios ranging from 1 1/8" to 8".

MATERIALS NEEDED:

Pantograph
Drawing board or table
Pencil leads
Masking tape
Drawing paper
Illustration
Eraser

EVALUATION PROCEDURES:

The finished drawings should be neat and clean and accurate, proportioned copies of the original. Any unwanted pencil lines should be erased.

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Thomas Keith Midgley

USING THE PANTOGRAPH
(Set I - Enlarging/Reducing - Card 59)

USING THE PANTOGRAPH
(Set I - Enlarging/Reducing - Card 59)

STEP-BY-STEP CARD FOR REDUCING SIZE OF PICTURES BY REVERSE PROJECTION
(Set I - Reduction - Card 60)

DEFINITION: Reverse Projection is a technique for making larger pictures smaller in size by using reflected light and the lense system of the overhead projector. (Details below)

PERFORMANCE OBJECTIVE: Using this system make a smaller accurate drawing of a larger visual.

STEP-BY-STEP PROCEDURE:

Read completely through all these instructions carefully at least once before you start this project.

1. When using the overhead projector to show a transparency on a screen, you place the transparency on the stage of the overhead, turn on the bulb in the projector and the illuminated image is enlarged by the raised lens system above the stage and then reflected onto the screen or the wall in front of the projector.

   NOW--with the system described in this step-by-step card the procedures are reversed.

2. Select a large picture (up to 15"x15"), fasten it to the wall in front of the overhead projector. (Use tape or tacks.)
3. Set up one or two directional photo-flood lights on stands or clip them to a chair. Turn the light on and adjust it so it shines onto the picture on the wall.
4. Set up an overhead projector on a movable projector stand. Now adjust the overhead projector lense system so it will focus on the illuminated picture on the wall. (Notice: The overhead projector is not turned on.) We are just using the lens system of the projector to reflect the picture from the wall onto the stage of the overhead projector.
5. Place a piece of white typing paper on the stage of the overhead. Next adjust the focus knob on the overhead projector until a sharp reflected image appears on the white typing paper.
6. A simple cardboard light shield can be made and fastened to the front stage area of the overhead projector in order to black out the light from the floodlights from reflecting onto the stage area of the overhead projector. This will help make the reflected picture image show up with more contrast. (The light shield that is fastened to the front of the overhead projector needs to be lower than the lens system.)
7. The overhead projector can be moved closer to the wall (which makes the reflected image larger) or the overhead projector can be moved further away from the wall (which makes the reflected image smaller. When the reflected image is the size you desire and it is in sharp focus, trace the lines that are reflected onto the typing paper and you then will have a small reduced accurate drawing of the picture you fastened to the wall.

HELPFUL HINTS:

1. This process works best in a darkened room. Room light or light from outside will make it difficult to see the projected image on the stage of the overhead projector.
2. Many times there is a need for a small drawing of a map, illustration, or diagram that can be used for a transparency, a cover for a program or a ditto handout for the students. The reverse projection process will assist in making these accurate but smaller reproductions in order to meet these visualizing needs.